THE ROLE OF SHAME AND SELF-COMPASSION IN THE RELATIONSHIP BETWEEN CHILDHOOD SOCIAL/RELATIONAL BULLYING AND DISORDERED EATING

by

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Abstract

Objective: Social and relational bullying (SRB) have been found to be associated with disordered eating, perhaps due to the heightened shame resulting from perceived social inferiority, low social rank, and/or negative evaluations from others. Self-compassion, a potential antidote to heightened shame, may act as a protective factor against the impact of SRB on disordered eating and shame. The current study aimed to address literature gaps by examining how SRB is related to disordered eating in emerging adulthood, whether this relationship is mediated by heightened shame, and whether self-compassion moderates the relationship between SRB and shame/disordered eating. **Method:** Participants (359 emerging adult undergraduate students aged 17-25) completed online self-report measures of recalled bullying and current disordered eating, shame, and self-compassion. Correlation coefficients between variables were generated and an advanced mediation model was used to determine whether self-compassion moderated the direct and indirect relationships between SRB and disordered eating, as mediated by shame. **Results:** SRB victimization was positively related to shame and disordered eating and negatively related to self-compassion in young adulthood with small-to-medium effect sizes. The association between SRB and disordered eating in adulthood was partially mediated by shame. Self-compassion did not moderate the relationship between SRB and disordered eating but it did moderate the path from SRB to shame. **Conclusions:** Childhood SRB is a significant predictor of disordered eating in emerging adulthood, partially through increased shame. Self-compassion may act as a buffer of the relationship between SRB and shame. Implications for clinical settings and anti-bullying awareness and prevention programs are discussed.

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1.0 Introduction

Bullying is defined as repeated acts of physical or verbal aggression deliberately intended to hurt someone in the context of a power imbalance (Olweus, 1993). Bullying can be broken down into four main types: physical (i.e., physical acts of aggression such as hitting), verbal (i.e., spoken attacks such as weight-related teasing), social/relational (i.e., acts intended to damage a person's social status or relationships), and cyber (i.e., bullying across social media platforms or other technology). While weight-related teasing is arguably the form of bullying most frequently examined in relation to disordered eating in nonclinical samples (Day et al., 2021), research has demonstrated that nonspecific victimization is also related to disordered eating (e.g., Copeland et al., 2015; Lee & Vaillancourt, 2018), as are social/relational bullying behaviours (e.g., Beekman et al., 2017; Lunde et al., 2006). One of the research goals of the current study was to add to the literature by examining the relationship between each form of childhood bullying and shame, body dissatisfaction, and disordered eating in emerging adulthood.

Social/relational bullying, including attempts to damage a person's peer relationships (e.g., social exclusion, breaking up friendships) or their social rank/status (e.g., rumour-spreading, exposing secrets), has been shown to be associated with a variety of mental health concerns (e.g., Beekman et al., 2017; Crick & Nelson, 2002; Lunde et al., 2006). However, it is seen as a less serious form of bullying (Jacobsen & Bauman, 2007) and has received less attention in the research literature in comparison to the other forms of bullying. Therefore, the primary aim of the current study was to address this gap by examining social/relational bullying, in particular, in relation to body dissatisfaction, disordered eating, and shame in emerging adulthood. In addition, the current study examined the mechanism by which childhood social/relational bullying relates to disordered eating in emerging adulthood. Specifically, the

current study investigated whether this association is explained by the increase in shame associated with social/relational bullying, as preliminary evidence suggests that shame may be especially important in explaining the link between childhood bullying and later maladjustment, including disordered eating (Duarte et al., 2017; Sweetingham & Waller, 2008).

Further, self-compassion is considered to be an antidote to shame (Gilbert, 2010) and may therefore be theorized to moderate the relationship between social or relational bullying and later psychopathology, including eating pathology. If self-compassion moderates the relationship between social/relational aggression and body dissatisfaction or disordered eating—that is, if victimized young adults who have higher self-compassion are less likely to develop body dissatisfaction and disordered eating behaviours—this will add to our knowledge of how to prevent and ameliorate the negative impacts of social/relational aggression.

1.1 Bullying and Adverse Consequences in Childhood and Emerging Adulthood

Estimates of the prevalence of victimization by any form of bullying among children and adolescents vary depending on the measure of bullying used and geographic region investigated. Recently, in a large, national U.S. sample, 26% of adults recalled experiencing childhood bullying (Sweeting et al., 2020). In a large, cross-national study of bullying trends from 1994 to 2006, between 25 to 40% of adolescents reported experiencing occasional bullying over the last school year in Canada (Molcho et al., 2009).

Traditionally, research on bullying has focused on physical and verbal aggression, where bullies overtly try to harm the victim using physical or verbal attacks. However, researchers have begun to realize that most bullying is covert. Buss (1961) first identified indirect aggression as a type of bullying where the aggression is covert, and where the aggressor may not be identifiable to the victim or even directly involved in the attack. Indirect aggression can be physical (e.g.,

damaging someone's belongings without their knowledge) or social (e.g., damaging their peer relationships). While girls appear to engage in less physical bullying than boys (Eagly & Steffan, 1986; Silva et al., 2013), girls have been shown to be more likely to use covert or indirect methods of bullying in self-report and observational studies (e.g., Lagerspetz et al., 1988; Österman et al., 1998; Rivers & Smith, 1994; Whitney & Smith, 1993).

1.1.1 Consequences of Childhood Bullying. In childhood, reported bullying experiences in various forms predict psychosomatic complaints (Gini, 2008), poor body image (Lunde et al., 2006), poorer school performance (Risser, 2013), substance use (Tharp-Taylor et al., 2009), depressive symptoms, suicidality (Klomek et al., 2007), and disordered eating (Copeland et al., 2015). Often, bullying is associated with other predictors of poor quality of life and mental health difficulties including low socioeconomic status (Tippett & Wolke, 2014), low social support and insecure attachments to parents (Hansen et al., 2012), parental maltreatment (Shields & Cicchetti, 2001), and general childhood stress (Garaigordobil & Machimbarrena, 2019) which may interact with bullying to predict adverse consequences.

Experiences of bullying in childhood also predict psychological and social difficulties in adulthood including depression (Copeland et al., 2013), high levels of shame (Carlisle & Rofes, 2007), disordered eating (Gattario et al., 2020), loneliness, poor self-esteem, general distress, fear about the future, and impairments in social- or work-related functioning (Sweeting et al., 2020). In addition to these mental health consequences, childhood experiences of bullying predict poorer self-reported physical health in adulthood (Takizawa et al., 2014). Interestingly, whether children are victimized in early childhood or in adolescence appears to influence how bullying affects health and well-being in adulthood. Specifically, it has been found that those who experienced bullying in early childhood are more likely to experience adverse mental health

outcomes in adulthood than those who experienced bullying in adolescence (Hoffman et al., 2017).

1.1.2 Bullying Among Post-Secondary Students. Most research on bullying to date has focused on childhood and adolescence. However, recent studies have found that bullying persists into young adulthood. Cyberbullying, in particular, is relatively common among university students. For example, in a large-scale internet-based survey of predominantly Canadian university students, 25% of students reported having a private video or photo shared of them without their permission and 28% of students reported being sent a hurtful or threatening message through online or text messaging (Mishna et al., 2018). Some forms of cyberbullying in university students involve social aggression. For example, 19% of students in this survey reported being excluded from a message or event in a manner that they believed was purposeful and hurtful. In addition, 13% reported having rumours spread about them online (e.g., through social media or e-mail) or through text messaging. Thus, a significant proportion of post-secondary students report having experienced both verbal and social aggression via technology during university.

Regarding in-person bullying, prevalence estimates vary widely (Lund & Ross, 2016). In a review of the limited literature examining bullying in post-secondary students by Lund and Ross (2016), the authors found that most available research suggests that about 20-25% of college/university students report in-person bullying across studies. However, authors cautioned that given the wide range of methodologies and inconsistent findings, it would be impetuous to draw conclusions about the prevalence of non-cyberbullying victimization in this population. For example, while the average percentage of post-secondary students reporting in-person victimization was 29% in this review, estimates across studies ranged widely from 5% to 70%.

1.1.3 Social and Relational Bullying. Lagerspetz and colleagues (1988) first introduced the idea of indirect bullying and hypothesized that the manipulation of friendship patterns to attempt to harm a victims' social status would be an indirect bullying technique more frequently used by girls. Using open- and closed-ended questions with 11- and 12-year-old boys and girls, Lagerspetz and colleagues (1988) found that girls used indirect methods of aggression more often than boys, especially circumventory behaviour that exploited and manipulated social relationships to harm a peer (e.g., suggesting to peers that they leave the target out of social activities).

Crick and Grotpeter (1995) defined "relational aggression" as a type of bullying that involves youth attempting to damage the victim's social relationships, social status, and thus, their sense of social belonging. Relational aggression is similar to social bullying in that it may include gossip and social exclusion, but it specifically refers to manipulation of peer relationships, and not general attempts to influence a person's social standing (Heilbron & Prinstein, 2008; Monks & Smith, 2006). The terms are often used interchangeably, and reviews of the research have suggested that there is little meaningful difference between the two terms (Archer & Coyne, 2005; Heilbron & Prinstein, 2008).

Relational aggression seems to be a pervasive problem, emerging at around age three (Ostrov et al., 2004) and persisting across cultures (Lansford et al., 2012). It occurs not only in a larger social context, but also within friendship groups. Crick and Nelson (2002) suggested that experiencing relational aggression within friendships may be particularly harmful, as it involves feelings of betrayal. In their study, they found that children in grades 3-6 with mutual friendships (both rating each other as a close friend) experience significantly higher relational aggression than physical aggression within their friendships, with 6% of boys and 12% of girls reporting

experiencing relational aggression from a close friend. For both boys and girls, relational victimization within friendships was associated with higher levels of self-reported loneliness, psychological distress, and externalizing difficulties. Girls who experienced this type of bullying also reported higher levels of social anxiety and social avoidance.

A large portion of the research on relational aggression to date has focused on girls (Voulgaridou & Kokkinos, 2015) and girls have been found to use more indirect methods than direct methods of aggression whereas boys are more likely to use direct aggression (Velásquez et al., 2010). However, a meta-analysis by Card et al. (2008) suggested that gender differences in relational aggression are negligible, although findings varied across studies likely due to variation in methodology and measurement. With respect to experiencing relational aggression, most research that does include both boys and girls have found that girls tend to be victims of social/relational bullying more often than boys (e.g., Chester et al., 2017; Crick & Nelson, 2002; Wang et al., 2009) although not all studies come to this conclusion (Coyne et al., 2006). Nonetheless, girls seem to experience more maladjustment as a consequence of relational victimization (Crick & Nelson, 2002; Merrell et al., 2006).

Some research has highlighted potential reasons why girls may be more likely to engage in, or report experiencing, relational bullying. For example, prescriptive stereotypes concerning social behaviour for children and adolescents suggest that it is more desirable for boys to be dominant and avoid being weak or shy whereas girls should avoid being dominant and instead be communal and wholesome (Koeing, 2018). Thus, more outward displays of aggression may be more socially acceptable for boys than girls. This may explain why girls in all-girls schools are more likely to engage in relational aggression than girls in mixed-sex schools (Velásquez et al., 2010). Peer group norms may be less salient in mixed-sex schools and consequently relational

aggression may be less expected from girls, becoming less socially acceptable (Velásquez et al., 2010). In addition, elementary school children understand the gender norms associated with bullying such that girls are more often relationally or verbally aggressive and boys are physically aggressive (Crick et al., 1996). Thus, boys may not want to engage in a behaviour perceived as feminine or there may be more stigma or shame attached to the behaviour. Alternatively, boys may not recognize relational aggression in other boys if it is perceived to be a behaviour limited to girls.

There is limited research on social/relational aggression in post-secondary students, and findings are inconsistent. Limited available research suggests that this form of bullying does persist into early adulthood (Beekman et al., 2017; Leenars & Rinaldi, 2010; Werner & Crick, 1999) and does not appear to occur more often in females than males. For example, Leenars and Rinaldi (2010) found no significant difference in this form of bullying between male and female undergraduate students and Storch et al. (2004) found males are more relationally aggressive than females.

Little research has examined the impact of social bullying that occurs in college/university on the mental health of victims, specifically. However, relational victimization experienced in post-secondary students has been shown to be associated with loneliness and depression (Dahlen et al., 2013), social phobia (Gros et al., 2010), and cognitive and somatic symptoms of anxiety (Gros et al., 2010). In addition, in a study examining social rejection in post-secondary females, specifically, Beekman et al. (2017) found that social rejection experienced by participants was related to concurrent restrictive eating and negative affect. Thus, available research suggests that experiencing social/relational bullying is associated with maladjustment in young adults as well as children/adolescents.

In summary, bullying experiences in childhood, adolescence and early adulthood have been shown to predict adverse mental health outcomes. Specific to the current study, bullying has been shown to be predictive of body image dissatisfaction and disordered eating symptoms.

1.2 Interpersonal Difficulties, Bullying, and Disordered Eating

A breadth of research has emphasized the importance of social relationships in the development and maintenance of eating disorders. Disordered eating has been shown to be associated with a variety of interpersonal difficulties including bullying (Copeland et al., 2015; Haines et al., 2006; Lie et al., 2019), increased social comparison (Corning et al., 2006), increased overall interpersonal conflict (Aimé et al., 2006), less satisfying social support (Grissett & Norvell, 1992), lack of assertiveness, and increased interpersonal hostility (Duschesne et al., 2012). Specific to emerging adults, research suggests that a difficult social transition to university predicts disordered eating symptoms in post-secondary students. In a sample of female first-year university students, moving away from parents and self-perceived poor social adjustment to university were predictive of more binge eating (Barker & Galambos, 2007). Interpersonal problems can even impact eating disorder treatment outcome (Carter et al., 2012; Hartmann et al., 2009 Jones et al., 2015;).

1.2.1 Bullying and Disordered Eating. Given the importance of social relationships in the development and maintenance of disordered eating, it is not surprising that bullying is consistently shown to be a significant predictor of both concurrent and future disordered eating in clinical and nonclinical samples. In fact, in a recent systematic review of bullying and disordered eating research, Day et al. (2021) concluded that adolescents who experience bullying, either weight-related teasing or nonspecific bullying, are more likely to experience concurrent and future disordered eating. Although, findings of longitudinal research examining

the association between bullying and future disordered eating have some conflicting results. For example, in one 5-year follow up study with a nonclinical sample of adolescents, weight-related bullying at baseline was associated with low self-esteem, poor body image, and maladaptive eating behaviors 5 years later (Haines et al., 2006). However, Copeland et al. (2015) found that although victims of recent nonspecific bullying aged 9 to 16 years old reported more concurrent symptoms of anorexia nervosa and bulimia nervosa, this association did not persist at long-term follow up. Social exclusion (a social/relational bullying behaviour) has also been found to be predictive of concurrent poor body image in 10-year-old boys and girls (Lunde et al., 2006) and restrictive eating in college women (Beekman et al., 2017).

In addition to research using nonclinical adolescent or emerging adult samples, research including clinical samples of people now diagnosed with eating disorders has demonstrated that bullying experiences appear to be a frequent occurrence among this population. For example, Frank and Acle (2014) found that among inpatient adolescent girls and adult women with eating disorders, 92% reported experiencing some form of bullying (verbal, relational, cyber, physical, or social) in their childhood. Past peer bullying experiences were associated with greater affective lability, lower self-esteem, and worse eating disorder symptoms in these patients. In addition, a recent meta-analysis examining the frequency of various forms of bullying in people diagnosed with eating disorders found that those with eating disorders, especially binge eating disorder and bulimia nervosa, were significantly more likely than healthy controls to report past bullying experiences (Lie et al., 2019). The reason why bullying relates to concurrent or future disordered eating is not frequently explored. However, the relationship between bullying and disordered eating has been proposed to be explained by the increase in shame associated with

bullying, specifically external shame (Sweetingham & Waller, 2008) and bodily shame (Duarte et al., 2017).

1.3 Shame and Disordered Eating

Gilbert (2002) defines shame as a complex experience that grows from a sense that one is inadequate, flawed, or inferior to others in some way. It may manifest as a blend of primary emotions such as anxiety or disgust, submissive or defensive behaviours such as hiding, or heightened parasympathetic activity (Gilbert, 2002). Gilbert suggests that this experience results from an understanding of self, awareness of what is valued by others, and social rules (Gilbert, 2003). Shame can be looked at as internal or external. Internal shame can be seen as a consequence of social threats or perceived social unattractiveness, where one feels that one's own attributes, personality characteristics and behaviours are inadequate or flawed (Gilbert, 1998). It refers to inner evaluations about oneself as inadequate by one's own standards. In contrast, external shame refers to an awareness of personal aspects of the self that are believed to be a source of rejection—that is, where one feels that others view them as inadequate or flawed (Gilbert, 1998).

Theoretical and empirical evidence suggest that disordered eating may be a maladaptive response to feelings of shame among vulnerable individuals. In an early study, Cook (1994) found that patients with eating disorders were higher in internal shame than other clinical populations. Since then, shame and proneness to shame have been shown to predict the severity of eating disorder symptoms in various studies (Blythin et al., 2020; Cavalera et al., 2016; Gois et al., 2018; Troop et al., 2008). As well, those with diagnosed eating disorders show significantly higher levels of shame than the general population, as well as higher shame-proneness than their non-disordered eating peers (Cavalera et al., 2016).

Shame about one's appearance is perhaps the aspect of shame most often examined in relation to disordered eating. In fact, Gilbert (1997) theorizes that one of the roots of shame is the knowledge of the importance of social attractiveness and feeling that one is inferior in this way. Body shame, a type of shame, occurs when the body is seen as inadequate, by appearance or function, and as a possible target of social criticism (Gilbert, 2002). Troop et al. (2006) suggested that to relate body shame to eating behaviour, body shame needs to be separated into current or anticipated body shame. That is, feeling that one's body is somehow inadequate or feeling that one's body may become inadequate, especially fear of weight gain. Current body shame is more closely related to binge eating episodes while anticipated body shame is closely related to behaviours aiming to prevent weight gain such as food restriction or purging. In a subsequent 2.5-year follow-up study, current body shame predicted weight loss, while anticipated body shame predicted an increase in fear of weight gain (Troop & Redshaw, 2012).

While bodily shame is the source of shame most often examined in relation to disordered eating (e.g., Duarte et al., 2015; Duarte et al., 2017; Iannaccone et al., 2016), many other sources of shame have been studied among people with eating disorders. For example, in a study focused on females with an eating disorder, Keith et al. (2009) found that people with eating disorders report shame with regard to their feelings, social isolations, and/or failures. Release from shame may explain some eating disorder behaviours. For example, those with eating disorders report that control over eating or resistance to change can lead to a sense of pride (Goss & Allan, 2009), arguably the opposite of shame, while binge eating can function as a way of coping with feelings of shame (Healtherton & Beaumeister, 1991). Goss and Gilbert (2002) proposed that a shame-pride cycle may be a useful model of specific disordered eating behaviours. Namely, current body shame predicts weight-control behaviours and successful weight control leads to feelings of

pride, an antidote to shame. However, the feelings of pride tend to be short-lived and feelings of shame tend to recur.

The mechanism by which bullying and shame interact to predict disordered eating has seldom been investigated. However, one study by Matos et al. (2015) found that shame experiences involving others (e.g., being criticized by peers) in childhood were associated with disordered eating through social comparisons. That is, one's idea about whether they are inferior or superior to others predicted the relationship between shame and disordered eating. This supports a theoretical model proposed by Gilbert (2000; 2003) stating that perceptions of social rank or social attractiveness directly influence feelings of shame. Thus, perceived social rank seems to be an important factor in the interaction between bullying and shame.

1.4 Social Rank, Shame, and Disordered Eating

Gilbert (2003) suggested that humans are innately motivated to seek social approval and belongingness. This gives rise to both a sensitivity to others' evaluations of us, and social competition. Self-evaluation is linked to how we believe others will evaluate us. For example, Santor and Walker (1999) found that participants sense of self-worth was derived from whether they had qualities that they believed were valued by others, and how much they believed others were interested in them. According to Gilbert (2000), social rank theory can be applied to shame and peer experiences such that feelings of inferiority, or that one has a low social rank, can result in shame. Social attractiveness, in particular, is a factor that humans view as especially important due to an evolutionary history of social acceptance being directly related to survival (Gilbert, 2000, 2003). Thus, when one believes themselves to be unattractive, or perceives social rejection, feelings of shame result (Gilbert, 2000, 2003). In support of this model, Gilbert (2000)

found that shame was significantly related to feelings of inferiority and submissive behaviour among 50 patients with depression.

Empirical evidence has suggested that shame and social rank are closely associated, and this has important implications for the relationship between bullying and disordered eating. Gilbert et al. (2007) posits that feelings of inferiority, competitiveness, and concern with one's self-presentation can lead to insecure striving, a feeling of pressure to prove oneself as being competent, seek validation from others, and avoid social rejection. Evidence for this model comes from studies showing that attempts at weight-loss through disordered eating are related to feelings of social insecurity or inferiority (Ferreira et al., 2013a; Ferreira et al., 2013b; Pinto-Gouveia et al., 2014). Thus, the pursuit of thinness may be a technique used by individuals with shame-proneness to improve one's social rank and acceptance (Burckle et al., 1999; Ferreira et al., 2013b). For example, Mendes and Ferreira (2020) applied a social rank perspective to disordered eating in the general population and found that external shame as well as a fear of being negatively evaluated by others predicted the severity of eating disorder symptoms. Further, the relationship between shame and disordered eating was mediated by insecure striving, meaning that feelings of low social rank and consequent striving to avoid inferiority may explain why external shame is related to disordered eating.

Given that bullying is theorized to depend on a power imbalance between aggressor and victim (Volk et al., 2014) is often perpetrated with the goal of social dominance (Olthof et al., 2011; Vaillancourt et al., 2003), is associated with socially-prescribed perfectionism (Vaillancourt & Haltigan, 2018) and that fears of negative evaluations from others or rejection are closely related to shame (Gilbert, 2000; Sznycer et al., 2016), research has examined whether the relationship between social/relational aggression and the development of disordered eating is

explained by chronic shame or self-criticism. Indeed, the relationship between childhood bullying experiences and subsequent disordered eating behaviours has been shown to be mediated by chronic shame (Sweetingham & Waller, 2008) and self-criticism (Feinson & Hornik-Lurie, 2016). Sweetingham and Waller (2008) found that shame mediated the relationship between childhood appearance-related teasing and current body dissatisfaction in a sample of 92 women with eating disorders. Similarly, Gois and colleagues (2018) found that external shame and self-criticism mediated the relationship between lack of positive social memories [specifically feeling valued, cared for, and accepted] and disordered eating in a non-clinical sample of adult women.

In summary, research suggests that self-criticism, unfavourable social comparisons, and shame are risk factors for developing disordered eating. To improve one's relationship with oneself, and combat the self-attacking associated with unfavourable social comparisons and shame, Gilbert and Irons (2009) suggested the importance of developing self-compassion.

1.5 Self-Compassion

Self-compassion, considered to be the antidote to shame, refers to the ability to relate to oneself and others in a caring and compassionate manner during difficult times (Gilbert, 2010). Self-compassion includes the tendency to distance the self from negative emotions and examine one's own pain without judgment and as part of the larger human experience (Neff, 2003). It has been suggested that self-compassion is an evolved mechanism that allows us to regulate our emotions by self-soothing, and thus, the aim of cultivating self-compassion is to foster feelings of reassurance and warmth towards oneself. Consequently, self-compassion can lower feelings of self-criticism and shame (Gilbert, 2010) and is associated with general well-being in adolescence (Neff & McGehee, 2010).

Neff (2003) suggested that there are three ways in which one can approach difficult feelings with self-compassion. First, there is common humanity (viewing our suffering as a common experience that all people go through) versus isolation. The second way is by approaching feelings of inadequacy with self-kindness versus self-judgment. Third, we may view our painful thoughts and feelings mindfully, with openness and without judgment. Alternatively, we can over-identify with painful emotions. Thus, researchers have suggested that we can self-regulate with either self-compassion or self-coldness (Brenner et al., 2018), with self-compassion predicting well-being and self-coldness predicting psychological distress (Brenner et al., 2018).

Self-compassion has been suggested to be an antidote to shame and self-criticism or self-attacking (Gilbert, 2010; Gilbert, 2011; Gilbert & Irons, 2009), perhaps improving mental health by improving emotion regulation (Inwood & Ferrari, 2018). Specifically, self-compassion has been found to be negatively related to shame-proneness (Johnson & Obrien, 2013; Woods & Proeve, 2014), social anxiety (Werner et al., 2012), incidence of non-suicidal self-injury (Xavier et al., 2016), anxiety and depressive symptoms (MacBeth & Gumley, 2012), poor psychological and affective well-being (Zessin et al., 2015), and poor body image (Ferreira et al., 2013c).

Relevant to the current study, researchers have found that self-compassion can buffer the effects of negative social experiences on shame. For example, in a study with university students, self-reported level of self-compassion partially mediated the relationship between recalled experiences of childhood bullying and current feelings of internal shame (Beduna & Perrone-McGovern, 2019). That is, the relationship between childhood bullying and adulthood shame was partially explained by differences in self-compassion, which the authors suggest exemplifies self-compassion as an effective coping mechanism protecting bullying victims from maladjustment.

1.5.1 Self-Compassion and Disordered Eating. Given that self-compassion is considered an antidote to shame, it is not surprising that self-compassion has been shown to be beneficial for improving eating pathology and related symptoms in both college and clinical samples. For example, higher self-compassion was a unique predictor of body preoccupation and eating guilt in a non-clinical sample of 142 undergraduate women, even after controlling for self-esteem (Wasylkiw et al., 2012). In addition, greater self-compassion has been shown to be related to less self-objectification (Mosewich et al., 2011), better body image, including increased acceptance of appearance flaws (Zhang et al., 2020), and better food-related self-regulation in binge eating disorder (Serpell et al., 2020).

Self-compassion has also been shown to protect against risk factors for disordered eating such that those higher in self-compassion experience less disordered eating. For example, self-compassion has also been shown to moderate the association between disordered eating and both appearance-related perfectionism (Bergunde & Dritschel, 2020) and pressure to be thin (Tylka et al., 2015). Self-compassion also appears to be a protective factor in the relationship between shame and disordered eating (Ferriera et al., 2013c). In Ferreira et al. (2013c), a sample of female eating disorder patients and a similar nonclinical sample were compared in terms of self-compassion, shame and disordered eating symptoms. To measure shame, researchers used the Other as Shamer Scale (Goss et al., 1994), which is specifically designed to measure external shame—that is, feeling that one is negatively evaluated by others. As expected, external shame predicted drive for thinness in both groups. Moreover, self-compassion partially mediated this relationship in the nonclinical population and fully mediated the relationship in the clinical population. This suggests that feeling that others are shaming you or looking down on you is connected with an increased drive for thinness, but if one faces external shame with high self-

compassion this connection is weakened. In other words, self-compassion may be the antidote for high external shame.

A related concept, the ability to reassure oneself (i.e., self-reassurance) is considered to be similar to self-compassion (Hermanto & Zuroff, 2016), but is mostly indicative of the self-kindness component of self-compassion (Neff, 2003) as it is perceived to be the opposite of self-criticism (Gilbert et al., 2004). Self-reassurance is positively associated with body appreciation and negatively associated with disordered eating symptoms and mediates the relationship between feelings of being accepted and disordered eating symptomology (Mendes et al., 2019).

The importance of self-compassion in eating disorders is evident in research examining self-compassion, compassion-focused therapy (CFT), and treatment outcomes. For example, a combination of low self-compassion and high fear of self-compassion at the start of treatment predicts poorer treatment response among people with eating disorders (Kelly et al., 2013). Clinical trials using CFT to build self-compassion have shown that these approaches to eating disorder treatment are effective. In a self-help approach to CFT in binge eating disorder patients, CFT led to a greater decrease in weight and eating concerns than behavioural strategies, a change that was particularly evident in patients with low fears of self-compassion (Kelly & Carter, 2015). In a group-based CFT intervention, those that received CFT in combination with treatment-as-usual had greater decreases in shame and eating pathology than the group that did not receive CFT (Kelly et al., 2017). A review of the evidence for CFT for eating disorders found that CFT addresses shame and self-criticism in eating disorder patients effectively (Goss & Allan, 2014).

1.6 Bullying, Shame, and Disordered Eating

Closely related to the aims of present study, preliminary research has investigated how shame may explain the relationship between bullying and eating pathology. To date, two cross-sectional studies (Duarte et al., 2015; Mendes et al., 2017), and a prospective longitudinal study (Duarte et al., 2017) have explored the mediating effect of shame on the relationship between bullying and disordered eating in nonclinical samples.

In a cross-sectional study by Duarte et al. (2015), 609 adolescent girls aged 12 to 18 completed self-report measures to investigate whether self-criticism and body image shame explain the relationship between bullying experiences and disordered eating. Results indicated that the relationship between bullying and disordered eating was fully mediated by body image shame and self-criticism. That is, the negative feelings about oneself, and particularly one's body, that are associated with bullying appear to explain the relationship between bullying and disordered eating. Duarte et al. (2015) demonstrated how shame may explain the relationship between bullying and concurrent disordered eating. However, this research design could not determine whether chronic shame explains the long-term relationship between childhood bullying and adulthood disordered eating. In another cross-sectional study focused on the recall of positive affiliative memories with peers (or lack there-of), Mendes et al. (2017) recruited a community sample of 632 adult women to determine whether affiliative memories with peers predicted disordered eating, and whether this association could be explained by external shame and self-judgment. It was found that positive memories of affiliation, including feeling accepted and safe within one's peer group, were negatively associated with disordered eating such that those with less positive affiliative memories experienced more disordered eating. This association was fully mediated by external shame and self-judgment, suggesting that critical

attitudes towards the self, or feelings of inadequacy, that may follow a lack of peer affiliative memories explains the relationship between scarcity of positive affiliative memories and disordered eating. While Duarte et al. (2015) and Mendes et al. (2015) provide preliminary evidence about the importance of shame in the relationship between bullying and disordered eating in females, neither study opened participation to males.

In the only longitudinal study examining shame as a mechanism by which bullying relates to disordered eating to date, Duarte et al. (2017) examined whether bullying experiences predicted body image shame, whether body image shame predicted subsequent disordered eating, and whether body image shame mediated the association between bullying and disordered eating in an adolescent sample. As with previous studies, no males were included. Self-report measures of bullying, body image shame, and disordered eating were administered at three time points over three years. It was found that adolescents who reported clinical levels of eating pathology at the third assessment point reported a higher frequency of previous bullying experiences compared to adolescents who did not report clinical levels of disordered eating. Using latent growth modelling, it was also found that higher baseline body image shame predicted increased disordered eating symptoms over time. Finally, the relationship between baseline bullying and disordered eating three years later was mediated by body image shame. Although the relatively short time period of the study necessitates caution, this suggests that increases in body image shame following experiences of bullying may explain the relationship between childhood bullying and later disordered eating.

In summary, preliminary evidence suggests that feelings of shame may explain the relationship between bullying experiences and disordered eating. However, the research to date has focused only on external and body image shame rather than internal shame. In addition, no

study to date has specifically examined whether social/relational bullying is associated with shame and disordered eating.

1.7 Bullying, Self-Compassion, and Disordered Eating

Previous research has demonstrated that increases in shame may explain the relationship between bullying and disordered eating (Duarte et al., 2015; Duarte et al., 2017; Mendes et al., 2017) and self-compassion is associated with lower shame in those who have been bullied (Beduna & Perrone-McGovern, 2019). Thus, self-compassion may play a role in the relationship between bullying and disordered eating. Only two studies to date have looked at whether self-compassion, body compassion, or self-reassurance moderates the relationship between bullying and disordered eating. In the first study, Duarte and Pinto-Gouveia (2017) tested a path model of the relationship between self-reported childhood bullying experiences, body image shame, self-reassurance, and disordered eating in a sample of adolescent females. Results indicated that self-reported bullying significantly predicted disordered eating, and that this relationship was mediated by body image shame. However, self-reassurance significantly interacted with bullying to predict both body image shame and disordered eating. That is, those who had experienced bullying but had high self-reassurance scores experienced less body image shame and disordered eating compared to those who had lower self-reassurance scores.

In the second study, Beekman et al. (2017) examined whether self-compassion acted as a protective factor in the relationship between social rejection or exclusion experiences (social bullying behaviour) and disordered eating in female university students. Using online self-report measures, it was found that social rejection was significantly positively related to disordered eating behaviours. In addition, participants with lower self-compassion scores showed a stronger relationship between social rejection and disordered eating suggesting that self-compassion

helped buffer the impact of social rejection. Thus, preliminary findings suggest the value of self-compassion as a protective factor for those who have been bullied.

1.8 The Present Study

The present study aimed to explore the relationships between bullying, shame, self-compassion, body dissatisfaction, and disordered eating. First, this study looked at the relationship between multiple forms of bullying and shame, body dissatisfaction, and disordered eating. Previous research examining bullying and body dissatisfaction or disordered eating has typically focused on either bullying in general or verbal bullying, specifically weight-based teasing. Therefore, this study will add important information about how other forms of bullying predict shame, body dissatisfaction, and disordered eating. This study then narrowed its focus on social/relational bullying to address questions about the mechanism by which social/relational bullying relates to disordered eating. Specifically, this study looked at shame as a potential mediator of this relationship. Limited research in this area has specifically examined social/relational bullying, and no research has examined the interactions between social/relational bullying, shame, and disordered eating. Thus, this is an important gap in the literature given the complex interactions found between social rank, shame, and disordered eating. In addition, the study included both males and females because the research to date on bullying and disordered eating has focused on females, typically excluding males from participation. Most research to date on bullying and disordered eating has also focused on adolescents or adult clinical samples, whereas this study was conducted with a nonclinical emerging adult sample. Finally, the current study aimed to add to the literature by examining self-compassion as a moderator of the indirect relationship between bullying and disordered eating, specifically mediated by shame. Given that self-compassion is considered to be an

antidote to shame, self-compassion may be associated with less shame and disordered eating among those who have experienced social or relational bullying. These findings will add to our knowledge of how to prevent and ameliorate the negative impacts of social/relational aggression.

Two research questions and three hypotheses were tested in this study. First, this study aimed to determine whether multiple types of bullying, specifically verbal, physical, threatening, social, and relational, will be associated with shame, body dissatisfaction, and disordered eating. Second, to add to the bullying literature, this study examined how the frequency of these forms of bullying differ across gender and age. In addition, the following hypotheses were tested: First, I hypothesized that more frequent overall bullying and social/relational bullying is associated with higher shame, greater body image concerns, and more disordered eating. Second, I hypothesized that shame mediates the relationship between social/relational bullying and disordered eating. Finally, I hypothesize that self-compassion will moderate the relationship between social/relational bullying and both shame and disordered eating. That is, victimized young adults with higher self-compassion report lower levels of shame and disordered eating.

2.0 Method

This study employed a cross-sectional design using self-report measures to address the hypotheses and research questions. Participants accessed an online survey through the Memorial University Psychology Research Experience Pool (PREP). On PREP, participants were given a link to the survey platform Qualtrics, where the study was being hosted. Participants could also access the study through the website link or QR code that was available on advertisements posted around campus or on social media platforms. Participants completed a series of questionnaires on Qualtrics at one time point. All aspects of this study were approved by the Interdisciplinary Committee on Ethics in Human Research (ICEHR) at Memorial University of

Newfoundland in accordance with the Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans 2 (TCPS2).

2.1 Participants

A total of 390 participants completed this study and of those, 359 met the age criteria for the study (17-25). The participants were 307 females (85.8%) and 46 males (12.8%), with 320 participants (89.1%) identifying as White/Caucasian. Included participants were all undergraduate or graduate students at Memorial University of Newfoundland's St. John's Campus or Grenfell Campus.

2.1.1 Participant Recruitment. Participants were recruited through two separate methods. First, participants were recruited from Memorial University of Newfoundland's Psychology Research Experience Pool (PREP). Students who accessed the survey through PREP followed a link to access the study and were granted course credit for completing the study. The remainder were recruited via social media posts on various websites (e.g., Facebook), signs posted across multiple buildings in both the St. John's and Grenfell Campus, and e-mails and newsletters circulated by the Grenfell Campus Psychology Society. Through these recruitment methods, students could access the study through the given link, a QR code, or by e-mailing the researcher. Given that students who did not access the study through PREP could not receive course credit for participating, all students were also given the option to enter their e-mail in a draw to win one of two $50 gift cards for additional incentive/compensation at the end of the survey.

2.2 Procedure

Participants accessed the study by clicking or typing out the anonymous link given (or using a QR code to access the website) which directed them to the survey platform Qualtrics to

complete the study. First, participants were presented with the informed consent form (see Appendix A), which presented a description of the purpose of the study and what participants would be asked to do. Participants were told at the end of the informed consent form that clicking the "next" button implied consent. Intentional non-disclosure was used such that participants were only told that the study aimed to examine the relationship between childhood peer experiences and adult eating behaviour. No information about shame or self-compassion was given to avoid any impact this may have on participant responses. Participants were asked to choose either "Research Participation" or "Research Observation". Those who chose "Research Participation" had their data included in the study.

Next, participants were directed to a series of ten questionnaires, 7 of which were used for the current thesis while the other 3 were used for other students' theses. Directions for completing each survey were presented in their respective sections. The first three surveys (Depression, Anxiety and Stress Scale [DASS-21], Self-Compassion Scale—Long Form [SCS], Experience of Shame Scale [ESS]) were presented in random order to prevent any order effects. Then, participants completed the Body Dissatisfaction subscale of the Eating Disorder Inventory (EDI-BDS), the Eating Disorder Examination Questionnaire (EDE-Q 6.0), and the Forms of Bullying Scale (FBS) in that order. The bullying scale was presented last to prevent any possible impacts of answering questions about these sensitive topics on responses to the other scales. All measures are described in the Measures section below.

Finally, participants were directed to a debriefing form (see Appendix B) which explained the true purpose of the study and allowed participants to choose whether or not they would like to have their responses included in the study. Of research participants who completed the study, 96.4% chose to include their responses in analysis. At the end of the survey,

participants could choose to enter their e-mail address on a separate page to be entered in the draw.

2.3 Measures

2.3.1 Demographics Questionnaire. Participants completed a series of demographic questions including gender, age, ethnicity, weight, height, employment status, mental health and eating disorder history, education, and marital status. The demographic questionnaire can be found in Appendix C.

2.3.2 The Self-Compassion Scale – Long Form (SCS). The Self-Compassion Scale – Long Form (SCS; Neff, 2003) is a 26-item self-report questionnaire that asks participants questions about their ability to be kind and non-judgmental towards themselves in accordance with the three components of self-compassion. First, the SCS determines whether respondents respond to feelings of inadequacy with self-kindness (e.g., "I try to be loving toward myself when I'm feeling emotional pain") or judgment (e.g., "When I see aspects of myself that I don't like, I get down on myself"). The second dimension is whether participants respond to emotional pain with feelings of common humanity (e.g., "When things are going badly for me, I see the difficulties as part of life that everyone goes through") or isolation (e.g., "When I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world"). Lastly, the measure examines whether participants tend to respond to emotional pain with mindfulness (e.g., "When I'm feeling down I try to approach my feelings with curiosity and openness") or overidentification (e.g., "When I'm feeling down I tend to obsess and fixate on everything that's wrong"). The questionnaire uses a 5-point Likert scale from 1 *(almost never)* to 5 (*almost always*). The total mean score can range from 1 to 5 with higher scores indicating higher levels of self-compassion. The SCS has been shown to have good internal consistency

among factors (Allen et al., 2012; Neff & Pommier, 2013), construct validity (Neff, 2003; Neff & Pommier, 2013) and discriminant validity (Neff, 2003; Neff & Vonk, 2009) Since its development, this questionnaire has been translated into multiple languages and has shown internal reliability and construct validity across languages and cultures (e.g. Halamová et al., 2018; Meng et al., 2019). Cronbach's alpha in the current study was 0.94.

2.3.3 The Experience of Shame Scale (ESS). The Experience of Shame Scale (ESS; Andrews et al., 2002) is a 25-item self-report measure of feelings of shame about one's character, behaviour or body. The measure has three factors. First, the measure examines one's feelings of shame about one's character (e.g., "Have you felt ashamed of the sort of person you are?"). Second, participants are asked about their feelings of shame toward their behaviour (e.g., "Have you tried to cover up or conceal any of your personal habits?"). Third, participants rate their feelings of shame about their body (e.g., "Have you worried about what other people think of your appearance?"). Each question is asked in reference to the past year and is answered with 1 (*not at all*), 2 (*a little*), 3 (*moderately*), or 4 (*very much*). The total score can range from 25 to 100 with higher scores indicating higher levels of shame. The scale has been shown to have good internal consistency, test-retest reliability and construct validity in university students (Andrews et al., 2002). Cronbach's alpha in the current study was 0.95.

2.3.4 Depression, Anxiety, and Stress Scale (DASS-21). The Depression, Anxiety, and Stress Scale (DASS; Lovibond & Lovibond, 1995) consists of 42 items comprising three subscales measuring symptoms of depression (e.g., "I couldn't experience any positive feeling at all"), anxiety (e.g., "I felt I was close to panic"), and stress (e.g., "I found myself getting agitated") over the past week, each with 14 items. This study used an abbreviated version of the DASS, the DASS-21, which is a 21-item version of the scale (DASS-21; Antony et al., 1998).

This version contains the same three subscales as the original scale but with 7 items per factor. Questions are answered on a 4-point scale from 0 (*did not apply to me at all*) to 3 (*applied to me very much or most of the time*). Scores are summed and then doubled to resemble scores on the full version of the DASS. The scores on each subscale range from 0 to 42, with higher scores indicating higher stress, anxiety, or depression. The DASS-21 has been found to have acceptable construct validity (Henry & Crawford, 2005) and, when compared to the original DASS, the DASS-21 had similar internal consistency and concurrent validity in general adult samples (Antony et al., 1998). Cronbach's alpha in the current study was 0.93.

2.3.5 Eating Disorder Inventory – Body Dissatisfaction Subscale (EDI-3-BDS). The Eating Disorder Inventory 3 (EDI-3; Garner, 2004) is a measure of eating disorder psychopathology (i.e., drive for thinness, body dissatisfaction, and bulimia) and related psychopathological features. This measure has been shown to have good convergent and discriminative validity (Clausen et al., 2011; Cumella, 2006). Only the Body Dissatisfaction subscale of the EDI-3 was used in the current study. This subscale consists of 10 items designed to assess concerns about specific parts of the body being inadequate (e.g., "I think that my thighs are too large") answered on a 6-point scale from 0 (*never* or *rarely*) to 4 (*always*). The total score ranges from 0 to 40, with higher scores indicating higher body dissatisfaction. This scale has also been shown to have good internal consistency and discriminative validity in nonclinical populations (Clausen et al., 2011). Cronach's alpha for the EDI Body Dissatisfaction subscale in the current study was 0.88.

2.3.6 Eating Disorder Examination Questionnaire 6.0 (EDE-Q). The Eating Disorder Examination Questionnaire 6.0 (EDE-Q; Fairburn & Beglin, 2008) is a 36-item self-report questionnaire that asks participants questions about their eating habits and feelings about their

body shape and weight to assess eating pathology. The items ask about the past 28 days. The EDE-Q has four subscales: Eating Concern (e.g., "Have you had a definite fear of losing control over eating?), Weight Concern (e.g., "Have you had a definite fear that you might gain weight?), Shape Concern (e.g., "Have you had a definite desire to have a totally flat stomach?") , and Restraint (e.g. "Have you been deliberately trying to limit the amount of food you eat to influence your shape or weight?). However, exploratory factor analyses have suggested that the shape and weight concern subscales represent a single factor (Darcy et al., 2013; Peterson et al., 2007). In addition, the EDE-Q asks participants about how often they have engaged in key eating disorder behaviours (e.g., binge eating and purging). Global EDE-Q scores are calculated as the average of the four subscales and range from 0 to 6 with higher scores representing more frequent symptomology. The EDE-Q has been shown to have good internal consistency (Hilbert et al., 2012; Mantilla et al., 2017), construct validity (Fairburn & Beglin, 1994; Mond et al., 2004) and test-retest reliability (Berg et al., 2012) in non-clinical populations. In the current study, Cronbach's alpha for the EDE-Q Global scale was 0.95. For the Eating Concern, Weight Concern, Shape Concern, and Restraint subscales, Cronbach's alphas were 0.84, 0.89, 0.82, and 0.85, respectively.

2.3.7 The Forms of Bullying Scale - Victimization (FBS - V). The Forms of Bullying Scale – Victimization (FBS; Shaw et al., 2013) is a self-report measure of the amount and type of bullying participants have experienced over their last school term either offline or online. This questionnaire is designed to measure various forms of bullying that clearly demonstrated intent to harm, specifically verbal bullying (e.g., "I was teased in nasty ways"), threats (e.g., "I was made to feel afraid by what someone said he/she would do to me"), physical bullying (e.g., "my things were deliberately damaged, destroyed or stolen"), social bullying (e.g., "secrets were told

about me to others to hurt me"), and relational bullying (e.g., "I was hurt by someone trying to break up a friendship"). Participants indicate the frequency of the behaviour on a 5-point Likert scale from 1 (*this did not happen to me*) to 5 (*several times a week or more*). The mean score ranged from 1 to 5 with higher scores indicating more frequent bullying. This questionnaire has been shown to have good construct validity, convergent and discriminant validity (Shaw et al., 2013). For the purposes of this research study, a slightly modified version of this questionnaire was used. In the original FBS, participants are asked about their experience within the last 12 to 18 weeks. In the current study, participants were asked to think back to their childhood when answering the questions. In addition, participants were asked to indicate during what time period any reported bullying had occurred (i.e., "junior high school", "high school", or "university"). Participants could choose any or all of these three options. The Cronbach's alpha for the total FBS was 0.92. Social and relational bullying were measured with 4 questions in this measure (items *b*, *c*, *i*, *j*; Cronbach's alpha = 0.88).

2.4 Statistical Analysis

Statistical analysis was completed using Jamovi (The jamovi project, 2020). Significance was determined at $p < .05$ for all analyses. There was minimal missing data, but any missing values were replaced by the overall mean for that item. To address hypothesis one, that higher levels of bullying would be associated with higher levels of shame, body image disturbance, disordered eating and lower levels of self-compassion, a Pearson's correlation coefficient matrix was generated. Because previous literature has demonstrated that social and relational bullying can be considered one type of bullying, and were highly correlated in the current study, social and relational bullying subscales were combined to form one subscale (called "social/relational" below) to address Hypotheses 2 and 3. Regarding hypothesis 2, that shame mediates the

relationship between bullying and disordered eating, a mediation analysis was conducted using Jamovi add-on jAMM (jamovi Advanced Mediation Models; Gallucci, 2019). A Sobel Test was conducted to determine whether the partial mediation was significant using RStudio (RStudio Team, 2020). To determine whether there was a moderated mediation effect, an ordinary least squares regression and the Jamovi add-on jAMM (jamovi Advanced Mediation Models; Gallucci, 2019) was used. Bullying and self-compassion were mean centered prior to analysis. Figure 1 demonstrates the conceptual conditional process model that was tested.

2.4.1 Power Analysis. A priori power analysis is typically not used nor useful for a moderated mediation (Hayes, 2013). However, to predict a minimum number of participants required to achieve 0.80 power for the simple Baron and Kenny mediation used in Hypothesis 2, Fritz and Mackinnon (2007) was referenced. For an estimated partial mediation with small-to-medium standardized coefficients ($a = 0.26$, $b = 0.26$), a minimum sample size of 224 participants was estimated to achieve 0.80 power for a simple partial mediation (Baron & Kenny, 1986) with $\tau' = 0.14$.

3.0 Results

3.1 Participant Demographics

Demographic characteristics of the sample ($N = 359$) can be found in Table 1. Participant age ranged from 17-25 ($M = 20.0$, $SD = 1.8$) and body mass index (BMI) ranged from 15.1-51.7 ($M = 24.8$, $SD = 5.3$). Participants were 89.1% Caucasian/White and 46.5% single. The majority (76.5%) reported that they had completed at least some undergraduate training and most (68.1%) had never lived in university residence. Of the 359 participants, 296 reported they have never been diagnosed with an eating disorder (82.5%), 28 reported they had been diagnosed with an eating disorder (7.8%), and 35 reported that they believe they have an eating disorder (9.7%).

Thirty-four participants indicated an immediate family member has been diagnosed with an eating disorder (9.5%).

3.2 Scale Means and Standard Deviations

The means and standard deviations of participant scores on the study measures are presented in Table 2.

3.3 Frequency of Bullying Across School Type, Residence, and Gender

Objective 1 was to examine the relative experience of bullying across gender and school stage. Overall, 319 participants reported any form of bullying at any time period measured in the study (88.9%). With respect to prevalence of bullying across gender, 275 females (89.6%) and 38 males (82.6%) reported being bullied in either junior high school, high school, or university. The only difference between genders with respect to FBS subscale scores was in terms of physical bullying frequency. Males reported a significantly higher frequency of physical bullying ($M_{\text{Female}} = 0.30$, $SD_{\text{Female}} = 0.61$; $M_{\text{Male}} = 0.53$, $SD_{\text{Male}} = 0.91$), $t(351) = 2.18$, $p = .03$, Cohen's $d = .34$. There were no significant differences between males and females in terms of verbal bullying, social/relational bullying, threatening, or all forms of bullying combined (see Table 3).

In terms of when bullying occurred, 283 participants reported they experienced bullying in junior high school (78.8%), 225 in high school (62.7%), and 26 in university (7.2%). In junior high school, 244 females (79.5%) and 34 males (73.9%) reported experiencing bullying. In high school, 190 females (61.9%) and 30 males (65.2%) reported experiencing bullying. In university, 23 females (7.5%) and 3 males (6.5%) reported experiencing bullying. Among those who attend university, there was no significant difference in bullying frequency in university between those who had lived in university residence ($M = 0.18$, $SD = 0.32$) and those who had not ($M = 0.06$, $SD = 0.24$), $t(331) = 1.66$, $p > .05$, Cohen's $d = 0.20$.

3.4 Bullying Was Associated with Higher Shame, Greater Body Image Dissatisfaction, and More Disordered Eating

Hypothesis 1 predicted that experiences of overall bullying and, specifically, social/relational bullying would be associated with higher shame, greater body image dissatisfaction, more disordered eating, and lower self-compassion. Table 4 presents a Pearson bivariate correlation matrix for these relationships. Supporting Hypothesis 1, global bullying scores were significantly related to shame ($r(357) = .35$, $p < .001$), body dissatisfaction ($r(357) = .24$, $p < .001$), disordered eating ($r(357) = 0.37$, $p < .001$), and self-compassion ($r(357) = -.28$, $p < .001$), with medium effect sizes. Also in support of Hypothesis 1, social/relational bullying scores were significantly related to shame ($r(357) = .35$, $p < .001$), body dissatisfaction ($r(357) = .28$, $p < .001$), disordered eating ($r(357) = .38$, $p < .001$), and self-compassion ($r(357) = -.29$, $p < .001$), with medium effect sizes. All other correlations were statistically significant except for the correlation between physical bullying and body dissatisfaction (Table 4).

3.5 Shame Partially Mediated the Relationship Between Social/Relational Bullying and Disordered Eating

Hypothesis 2, that shame would mediate the relationship between social/relational bullying and disordered eating, was partially supported. As modeled in Figure 2, shame partially mediated the relationship between social/relational bullying and disordered eating. The effect estimate for the relationship of social/relational bullying and disordered eating ($c = 0.48$, $SE_c = 0.06$) was statistically significant with a standardized effect size of $\beta = 0.379$, and the estimated indirect relationship between social/relational bullying and disordered eating ($a \times b = .24$; $SE_{a \times b} = .04$) was also statistically significant ($Z = 6.13$, $p < .001$) with a standardized effect size of $\beta =$

0.186. Because the direct effect (c' = 0.25; SE_c = .06; β = 0.193) was significant (Z = 4.36, p < .001), a Sobel Test was conducted. The Sobel test showed that there was a significant partial mediation, Z = 6.33, p < .001, where the indirect relationship accounted for a large portion of the variance in disordered eating, percent mediation = 49.07%. This indicates that level of shame partially accounted for the relationship between social/relationship bullying and disordered eating.

3.6 Self-Compassion Moderated the Relationship Between Bullying and Shame but not the Relationship Between Bullying and Disordered eating or Shame and Disordered eating

Hypothesis 3a proposed that self-compassion would moderate the relationship between social/relational aggression and disordered eating. Contrary to Hypothesis 3a, a simple moderation analysis found that self-compassion did not moderate the total relationship between social/relational bullying and disordered eating, Z = -1.41, p = .157.

Given that shame did partially mediate the relationship between social/relational bullying and disordered eating, we went on to test Hypothesis 3b, that self-compassion would moderate the indirect relationship between social/relational aggression and disordered eating as mediated through shame, and the direct relationship between social/relational aggression and disordered eating, using the conditional mediation model. Figure 3 presents the model used to test Hypothesis 3b and Table 5 presents model coefficients and their associated p values. Table 6 presents effect estimates for the effect of social/relational bullying on shame, the effect of shame on disordered eating, and the direct effect of social/relational bullying on disordered eating at differing levels of self-compassion.

The first step in testing the model was to examine whether self-compassion moderated the relationship between social/relational bullying and shame (path *a*) by testing the path between social/relational bullying and shame (a_1), the path between self-compassion and shame (a_2) and the path between the interaction between the two predictors and shame (a_3). As presented in Table 5, all three coefficients were statistically significant, suggesting that self-compassion did moderate the relationship between social/relational bullying and shame ($Z = 2.95, p < .005$). As presented in Table 6, the relationship between social/relational bullying and shame is stronger among those with higher levels of self-compassion. A linear regression was used to further investigate the moderating effect of self-compassion on the relationship between social/relational bullying and shame by entering social/relational bullying and self-compassion in step one and adding the interaction term between social/relational bullying and self-compassion in step two. It was found that the interaction term led to a significant increase in R^2 from 0.464 to 0.476 indicating that the interaction between social/relational bullying and self-compassion improved the prediction of shame scores compared to social/relational bullying alone.

The next step in testing the model was to examine whether self-compassion moderated the relationship between shame and disordered eating (path *b*) by testing the path between shame and disordered eating (b_1) and the path between the interaction of the predictors and disordered eating (b_2). It was found that the relationship between shame and disordered eating (b_1) was not moderated by self-compassion as the coefficient of the path between the interaction term and disordered eating (b_2) was not statistically significant (see Table 5).

The final step in testing the model was to determine whether self-compassion moderated the direct relationship between social/relational bullying and disordered eating (path *c*) by examining the path between social/relational bullying and disordered eating (c_1), the path

between self-compassion and disordered eating (c_2), and the path between the interaction of the predictors and disordered eating (c_3). This model is illustrated in Figure 3. As seen in Table 5, coefficients c_1 and c_2 were significant, but c_3 was not significant, suggesting that self-compassion did not moderate the direct relationship between social/relational bullying and disordered eating.

4.0 Discussion

The purpose of this thesis was to investigate the interrelationships between bullying, specifically social/relational bullying, and disordered eating, body dissatisfaction shame, and self-compassion. First, this study investigated the correlation between different forms of bullying and disordered eating, body dissatisfaction, and shame. Second, this study investigated the mediating role of shame in the relationship between bullying and disordered eating. Finally, this study used a conditional mediation model to investigate the moderating role of self-compassion in the relationships between bullying and shame and bullying and disordered eating. This discussion begins with a review of the key findings of the present study followed by an examination of the strengths and limitations of the study, clinical implications of the findings, and future research directions.

4.1 Types of Bullying Across Gender and School Stage

The first finding of this study concerned the period prevalence of the various types of bullying throughout junior high school, high school, and university. In this sample, nearly 90% of participants reported any experiencing any form of bullying. This is higher than what has been reported in some previous research using Canadian samples. Two explanations may account for this discrepancy. First, participants in the current study reported any bullying that occurred over junior high school, high school, and university which is a much longer time frame than used in many previous studies (e.g., Sweeting et al., 2020; Lund & Ross, 2016; Molcho et al., 2009).

Second, estimates of bullying prevalence have been found to vary largely due to different definitions of bullying victimization used by researchers and differences in the way bullying is measured (Modecki et al., 2014). Importantly, the question added to the bullying scale in the current study that assessed when reported bullying experiences took place referred to participants' report of *any* bullying incident that occurred at least once. In contrast, in Molcho et al. (2009) participants were asked to indicate if they were bullied over the past couple of months and how frequently. It is possible that many participants in the current study who reported one or two indirect bullying incidents would not identify that they were the victim of bullying as they only experienced isolated incidents of covert aggression. This interpretation outlining two potential reasons for the high bullying prevalence reported in the current study relative to previous research is supported by the fact that the prevalence of bullying found in this study is similar to the prevalence found in previous research with Canadians samples that included questions about indirect bullying (e.g., Freeman et al., 2011; Salmon et al., 2018) or measured bullying that occurred over a longer period of time (Salmon et al., 2018).

Only a small number of students reported experiencing bullying in university in the current study, slightly smaller than what has previously been reported in previous research (Lund & Ross, 2016). One possible reason for this discrepancy is that the average age of participants in the current study is between one to two years younger than in many previous studies (Lund & Ross, 2016) and thus, participants have likely completed less university education. If participants in the current study had spent more time in university, the prevalence of bullying likely would have increased.

Regarding gender differences, females reported a higher frequency of social/relational, verbal, and threatening forms of bullying although these differences were not statistically

significant. Effect sizes were small for gender differences in verbal and threatening bullying, and between small and medium for gender differences in social/relational and physical bullying. However, males did report significantly more physical bullying. The finding that females did not report/experience significantly more social/relational bullying contradicts most previous research in this area which has suggested that relational aggression is more frequently perpetrated and experienced by females (e.g., Lagerspetz et al., 1988). However, importantly, there may not have been enough power to detect a significant gender difference in social/relational and physical bullying in the current study given the group sizes were highly unequal, with only a small number of males.

4.2 Bullying's Associations with Shame, Body Dissatisfaction, and Disordered Eating

As hypothesized, all types of bullying (i.e., social, relational, threatening, physical, verbal) were positively associated with shame, disordered eating, and body dissatisfaction. In all cases, the strongest associations were with social or relational bullying. These findings are in line with previous research suggesting that bullying is positively associated with both shame (Carlisle & Rofes, 2007; Mendes et al., 2017) and disordered eating (Copeland et al., 2015). In addition, this present finding is in line with previous research suggesting that both verbal (Goldfield et al., 2010; Haines et al., 2006) and social/relational (Lunde et al., 2006) bullying are associated with poor body image or disordered eating.

4.3 Shame Explains Part of the Link Between Social/Relational Bullying and Disordered Eating

In support of the second hypothesis, it was found that shame accounts for part of the relationship between social/relational bullying and disordered eating, as a partial mediation was found. This is the first study to investigate the mediating role of shame in the relationship

between social/relational bullying and disordered eating. However, the finding is consistent with the broader literature suggesting that shame mediates the relationship between bullying and disordered eating in clinical samples (Sweetingham & Waller, 2008) and that body image shame mediates this relationship in nonclinical samples (Duarte et al., 2015; Duarte et al., 2017). For example, in Duarte et al. (2015), the relationship between bullying and disordered eating in adolescents was fully mediated by scores on a measure of body image shame and in Duarte et al. (2017), the relationship between bullying and later disordered eating was mediated by changes in scores of body image shame.

There are a few factors that may contribute to why only a partial mediation was found in the current study compared to previous research which found that shame fully mediated the relationship between bullying and shame. Previous research in nonclinical samples has focused on global bullying scores [as opposed to social/relational bullying] and body image shame [as opposed to overall shame] (Duarte et al., 2015; Duarte et al., 2017). Thus, it may be the case the body image shame is a better mediator of the relationship between bullying and disordered eating, specifically overall bullying. In addition, other mediators of the relationship may be at play, such as socially prescribed perfectionism associated with bullying victimization (Vaillancourt & Haltigan, 2018). Finally, the current study measured current shame versus past bullying experiences that may have occurred many years earlier, whereas previous studies examined shame within 3 years of the bullying experiences. Perhaps shame that occurs at the time of bullying better explains the relationship between past bullying and current disordered eating rather than current shame.

4.4 Self-Compassion Moderates the Relationship Between Social/Relational Bullying and Shame but not Disordered Eating

The third hypothesis in this study was that self-compassion would moderate the relationship between social/relational bullying and disordered eating. When self-compassion was tested as a moderator of the total relationship between social/relational bullying and disordered eating in this study, self-compassion was not a significant moderator. That is, the total relationship between social/relational bullying and disordered eating was not significantly different at different levels of self-compassion. This contradicts previous research in this area. For example, self-compassion has been found to moderate the relationship between social exclusion and disordered eating in college females (Beekman et al., 2017) and the related concept of self-reassurance has been shown to moderate the relationship between bullying and disordered eating (Duarte & Pinto-Gouveia, 2017).

In addition to testing self-compassion as a moderator of the total relationship between social/relational bullying and disordered eating, self-compassion was also tested as a moderator for each component of the mediation model. When testing the conditional process model, self-compassion did significantly moderate the relationship between social/relational bullying and shame. That is, the predictive value of social/relational bullying on shame depended on participants' level of self-compassion. However, the direction of this relationship was the opposite of what Gilbert's (2010) theory and previous research would predict. Namely, the relationship between social/relational bullying and shame became stronger as self-compassion increased. This may explain why self-compassion did not moderate the total relationship between social/relational bullying and disordered eating, as was hypothesized. This is an interesting finding given that self-compassion was negatively related to both social/relational

bullying and shame, and that social/relational bullying was positively related to shame. Further, this finding contradicts previous findings from Duarte and Pinto-Gouveia (2017) indicating that self-reassurance moderated the relationship between bullying and body image shame, such that those who were bullied but had high self-reassurance scores experienced less body image shame than those with low self-reassurance scores.

In attempting to understand this finding, it is important to consider the broader literature surrounding self-compassion, as this literature suggests that self-compassion may not always buffer the impact of bullying on later mental health, depending on certain variables. There are a few possible reasons why self-compassion did not moderate the relationship between social/relational bullying and disordered eating in the present study. First, it is possible that once the variance accounted for by shame as a mediator was removed from the model, there was not enough statistical power to detect self-compassion as a moderator of the direct relationship between social/relational bullying and disordered eating. Given that shame was shown to be a mediator of the relationship between social/bullying and disordered eating, this could explain why self-compassion did not significantly moderate the relationship between bullying and disordered eating. As seen in Table 6, when the direct relationship between social/relational bullying and disordered eating was examined, the relationship was stronger when self-compassion was less than one standard deviation below the mean and weaker when self-compassion was one standard deviation above the mean. However, this moderation did not reach statistical significance. Importantly, given that shame is a mediator of the relationship between bullying and disordered eating and will often be present, the moderating effect of self-compassion on the direct relationship between social/bullying and disordered eating when shame is removed may not be clinically significant. It is important that future research examine the

moderating effect of self-compassion on the relationship between bullying and shame. For example, perhaps those who have experienced frequent childhood bullying have higher shame and lower self-compassion at the time compared to children who have not, but a stronger awareness of emotional experiences leads to both higher self-compassion and higher shame later in life. Those who have experienced frequent bullying may have higher shame but may also be more likely to access therapy or develop emotion regulation skills and thus, develop more self-compassion. This relationship should be further investigated.

A second potential explanation for why self-compassion did not moderate the relationship between social/relational bullying and disordered eating in the present study may be related to the timing of variable measurement. Previous research has focused on adolescents and therefore bullying experiences occurred closer in time to when measures of shame and self-compassion were administered. For example, in Duarte and Pinto-Gouveia (2017), self-reassurance was found to moderate the relationship between recent bullying and disordered eating in a sample of adolescents. In this study, the self-reassurance, body shame, and disordered eating measures would have been given near the time of bullying. In Beekman et al. (2017), where self-compassion moderated the relationship between social rejection and restrictive eating, the focus was on current bullying experiences, and self-compassion and restrictive eating were measured at the same time bullying was taking place. Thus, it is possible that high self-compassion at the time bullying is taking place may buffer the impact of bullying on poor mental health. However, self-compassion may change over time, and may not be a significant moderator of the relationship between recalled bullying and current mental health. Third, given that emotion regulation has been found to mediate the relationship between self-compassion and positive mental health (Inwood & Ferrari, 2018), improvements in emotion regulation associated

with self-compassion may explain the protective role of self-compassion in previous studies examining self-compassion and bullying. In the current sample, another emotion regulation strategy may be a more effective moderator of the relationship between bullying and disordered eating.

4.5 Strengths and Limitations of the Study

4.5.1 Strengths. This study had several notable strengths. The first strength was the measures used. First, all measures used were reliable and valid measures which allowed confidence in the measurement of variables. In addition, in comparison to previous studies in this area, this study used an additional measure of body dissatisfaction (the EDI-BDS) given that the EDE-Q (the measure used in previous studies) does not have a subscale measuring body dissatisfaction specifically. Finally, this study used the FBS-V, which includes five subscales to examine bullying as a multifaceted concept. This allowed the comparison of various types of bullying across gender and examination of the relationships of each type of bullying with shame, body dissatisfaction, and disordered eating.

The second strength of this study was that it addressed a gap in the current literature by focusing on a nonclinical sample of emerging adults. Most research in this area has focused on adolescents, measuring current bullying, shame, self-compassion, or disordered eating in adolescents (e.g., Duarte et al., 2015; Duarte et al., 2017). Thus, the current study added insight on the relationships between recalled bullying experiences and shame, self-compassion, and disordered eating in early adulthood. In addition, prior research on bullying, shame, and disordered eating that has included adults has looked at recalled bullying experiences in clinical samples (Sweetingham & Waller, 2008) whereas the current nonclinical sample is more generalizable to the general population of emerging adults.

The third strength of this study was that it included males. While most participants were female, the addition of males is still a notable strength as previous research in this area has excluded males. This allowed for the comparison of bullying types across gender, and the exploration of the relationships between bullying, shame, self-compassion, and disordered eating in a general sample rather than just a female sample. Although study participation was open to all genders, the majority of participants were female. Therefore, future research should focus on recruiting an equal number of males and females.

4.5.2 Limitations. This study also had certain limitations. First, as with all cross-sectional research, the data were collected at one point in time and, therefore, there is no information about the temporal relationships between variables. For example, it may be that self-compassion at the time of bullying has a protective role in the later development of disordered eating. Without longitudinal research, it is impossible to infer the temporal or directional relationships between the study variables. In addition, given that the relationships between variables are correlational, other non-measured predictors of poor quality of life that are associated with bullying (e.g., Garaigordobil & Machimbarrena, 2019; Hansen et al., 2012; Shields & Cicchetti, 2001; Tippett & Wolke, 2014) could be driving the correlations between bullying and disordered eating, shame, and body dissatisfaction. A related concern is that measuring recalled bullying in adulthood rather than during adolescence introduces the possibility for recall bias. That is, given that any reported bullying may have taken place years ago, inaccuracies in memory surrounding these events may have impacted scores on the bullying measure. For example, neuroticism and agreeableness have been found to be related to overestimation or underestimation of the frequency of adverse childhood events (Reuben et al., 2016).

Another possible limitation is self-selection bias. While limited information was posted on advertisements for this study across campus, the advertisement for the study involved the terms "peer relationships" and "eating behaviour". The advertisements were posted around campus and as an option for an available study to complete to gain course credit. In either case, participants had the option to complete the study or not based on their interest in the topic. Participants who choose to complete a study focused on peer relationships and eating behaviour may have different experiences than those who have no affinity towards this topic. Thus, this sample may differ from a sample who were not given any prior information about the study and this may limit the generalizability of the findings.

Another potential limitation concerning external validity is whether this sample is representative of the emerging adult population. First, this sample consisted of primarily Caucasian university students which may limit generalizability of the results. A more diverse community sample would likely be more generalizable to the emerging adult population as a whole. In addition, while efforts were made to include males in this study, the sample was still mainly (85.8%) female. The third potential concern with the sample is that the mean DASS score was more than one standard deviation above values previously found for community nonclinical samples (Sinclair et al., 2011) and somewhat higher than previous student samples (e.g., Atkinson, 2020). The average score for participants in the current study indicates moderate depression, moderate anxiety, and mild stress (Atkinson, 2020). This may mean that the sample was not representative of the general population of emerging adults. One possible explanation for elevated DASS scores in the sample is that some data collection was taking place during nationwide stay-at-home recommendations as a result of the SARS-CoV-2 (COVID-19) pandemic between March 2020 and August 2020. The COVID-19 pandemic and consequent

isolation and stress experienced by students may have impacts on students' mental health that may be further complicated by the switch to virtual schooling (e.g., Kecojevic et al., 2020; Son et al., 2020). Thus, higher DASS scores among the population of emerging adult university students may be anticipated during part of the time frame in which data collection was taking place. This may indicate that the difference between the current sample's DASS scores and population DASS scores may not be as significant concern. While 7.8% of the sample indicated that they had been diagnosed with an eating disorder, this rate does not exceed current estimates of the point prevalence of eating disorders (Galmiche et al., 2019). In addition, the mean EDE-Q score of 1.78 is similar to previously reported average scores for young adult women (Carey et al., 2019; Mond et al., 2006).

4.6 Future Research Directions

Based on the results and limitations of this study, there are a variety of future research avenues that will be important to explore. Given the significant prevalence and impact of social/relational bullying, it will be important to understand how social/relational bullying impacts mental health in the future, ideally through longitudinal research. While the current study established relationships between bullying, shame, self-compassion, and disordered eating, this was a cross-sectional study and cannot determine temporal or causal relationships between bullying and consequent mental health concerns. To establish a directional relationship, wherein social/relational bullying precedes higher shame, lower self-compassion, or more disordered eating, longitudinal research is needed. Specifically, it may be beneficial to measure social/relational bullying and self-compassion in childhood and adulthood shame to investigate whether self-compassion may be a protective factor for the later development of shame in those who have been bullied.

To get a complete picture of the relationships between the study variables in emerging adults, future research should aim to gather a more representative sample. Specifically, males are often excluded from or underrepresented in research examining how bullying relates to disordered eating (Day et al., 2021; Lie et al., 2019). As was seen in this study, males report recalled social/relational bullying in childhood at similar levels to females, and research must make efforts to examine how social/relational bullying affects males as well as females.

Finally, future research should include a measure of the harm of bullying rather than the frequency. The current study included a measure of frequency of different forms of bullying, which allowed for the investigation of how objective experiences of bullying impact later mental health. However, different forms/frequency of bullying may impact participants in different ways as factors such as social support or resiliency may impact the harm of bullying, and so a rating of how hurt participants were by the instances of bullying is an important measure to include in future research.

4.7 Implications

4.7.1 Clinical Implications. The first major implication of the results of this study pertains to the clinical significance of social/relational bullying, self-compassion, and shame on disordered eating in those who have been bullied. Specifically, the current findings suggest that shame has a direct influence on whether those who have experienced social/relational bullying also experience disordered eating. This is supported by previous research findings (Duarte et al., 2015; Duarte et al., 2017; Mendes et al., 2017). In addition, it was found that shame was positively related to all types of bullying. This is important information for both school counselors and clinical psychologists. While the current study design does not allow firm conclusions about the direction of this relationship or whether the relationship is causal, the

findings suggest that interventions to reduce shame among victims of bullying may reduce the risk for later disordered eating. In addition, it is important in therapeutic settings to determine whether those who have experienced bullying in the past and are experiencing current disordered eating may be experiencing high shame.

A second clinical application of this study and how the findings fit into the broader literature is that it is important to ensure the development of self-compassion at the time that bullying is taking place. While past research suggests that high self-compassion at the time of bullying reduces the relationship between bullying and disordered eating (Beekman et al., 2017; Duarte & Pinto-Gouveia, 2017), this study found that adulthood self-compassion does not moderate the relationship between recalled bullying and current disordered eating. Thus, it may be that it is imperative to foster self-compassion in children and adolescents who are currently experiencing bullying, as this may buffer the long-term mental health consequences of bullying.

4.7.2 Anti-Bullying Programs and Awareness. Another major implication of this study involves the importance of raising awareness about social/relational bullying as a serious and potentially damaging form of bullying. Currently, social/relational bullying may not be taken as seriously as physical bullying by teachers or school counsellors, with school counsellors less likely to intervene (Jacobsen & Bauman, 2007; Boulton et al., 2014; Yoon & Kerber, 2003), and less likely to show empathy for relational bullying victims (Jacobsen & Bauman, 2007). In Jacobsen and Bauman (2007), for example, school counsellors were shown vignettes depicting physical, verbal, and relational bullying scenarios and asked about the seriousness of the bullying, their likelihood of intervening in the situation, and empathy for the victim. Counselors rated the relational bullying incident as less serious, reported less empathy for the relational bullying victim, and reported that they would be less likely to intervene in the relational bullying

scenario. These results were replicated in a more recent study by Boulton et al. (2014) with preservice teachers. Thus, it seems that school counselors and teachers are less likely to take relational bullying seriously, despite research, including the current findings, indicating the seriousness of relational bullying.

Although social/relational bullying seems to be taken less seriously than physical or verbal bullying, anti-bullying training and information may reduce the incidence of social/relational bullying and improve outcomes for victims. In Jacobsen and Bauman (2007), school counselors who had received anti-bullying training rated a vignette about a relational bullying scenario as more serious than those who had not. In addition, school counsellors who worked in schools with anti-bullying programs reported that they would be more likely to intervene in the relational bullying scenario than those who worked in schools without an anti-bullying program.

In addition to training aimed at improving awareness of social/relational bullying among teachers or school counsellors, schools could prioritize using evidence-based interventions to reduce the frequency of social/relational bullying among school children by targeting risk factors for relational bullying, such as beliefs favouring violence rather than nonviolent alternatives (Elsaesser et al., 2013). For example, Frey and colleagues (2005) developed and tested a brief intervention program, *Steps to Respect*, aimed at reducing both direct and indirect bullying by improving staff responses to bullying, fostering social responsibility in children, and improving social-emotional skills in children with staff training and classroom curriculum. The intervention led to increased bystander responsibility and lower acceptance of bullying in children. In a follow-up study by Low and colleagues (2010), the *Steps to Respect* intervention program was

found to decrease malicious gossip compared to a control group, especially among children with supportive friendships.

This study adds to a large body of literature suggesting that social/relational bullying is just as harmful as overt forms of bullying and it is important to implement programs in schools that reduce the frequency of social/relational bullying and improve knowledge about effective interventions for this form of bullying.

5.0 Conclusions

Childhood bullying predicts a variety of mental health consequences in adulthood, including shame (Carlisle & Rofes, 2007) and disordered eating (Gattario et al., 2020). Understanding how social/relational bullying influences mental health is of particular importance given that research suggests this form of bullying tends to be taken less seriously by teachers and school counsellors (Jacobsen & Bauman, 2007; Yoon & Kerber, 2003). The results of the current study suggest that recalled social/relational bullying has a significant positive relationship with shame and disordered eating and is negatively associated with adulthood self-compassion. In addition, the results of this study suggests that the relationship between recalled social/relational bullying and disordered eating is partly explained by an increase in shame experienced by those who have been bullied. This highlights the importance of shame in childhood bullying victims. In addition, this study found that adulthood self-compassion does not moderate the relationship between recalled social/relational bullying and disordered eating. Given that previous research has found that high self-compassion at the time of bullying weakens the relationship between bullying and disordered eating (Beekman et al., 2017; Duarte & Pinto-Gouveia, 2017), it may be the case that self-compassion is only effective as a moderator of the relationship between bullying and disordered eating if children develop self-compassion at the time that they are

experiencing bullying. However, future research examining the relationships between bullying, self-compassion, shame, and disordered eating, particularly longitudinal research, is imperative to ensure that there is a clear understanding of how these variables interact.

In addition to providing insight about how social/relational bullying, shame, and self-compassion interact to predict disordered eating, this study, in conjunction with past research, suggests that social/relational bullying is a significant predictor of future mental health concerns, particularly shame and disordered eating. This is an important consideration for both school counselors and teachers as well as anti-bullying campaigns. It is important for children experiencing social/relational bullying to recognize the behaviour as bullying, and for adults to understand the serious nature of this form of bullying and, thus, show empathy and concern for victims.

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Table 1

Sociodemographic Characteristics of Participants

Demographic	Frequency	Percent (%)
Gender		
Female	307	85.8
Male	46	12.8
Transgender/Non-Binary	5	1.4
Marital status		
Single	166	46.5
Married or in a Relationship	191	53.5
Education level obtained		
Some undergraduate training	274	76.5
High school diploma or equivalent	72	20.1
Bachelor's, master's, or professional degree	12	3.4
University Residence		
Currently living in residence	45	12.6
Lived in residence in the past	51	14.3
Have never lived in residence	243	68.1

Table 2

Means and Standard Deviations of Participant Scores on Study Measures

Scale	Mean	Standard Deviation
Self-Compassion Scale (Total)	2.73	0.72
Over-Identification	2.43	0.96
Self-Kindness	2.84	0.94
Self-Judgment	2.45	0.90
Common Humanity	3.06	0.94
Mindfulness	3.05	0.86
Isolation	2.52	0.94
The Experience of Shame Scale (Total)	66.01	16.54
Characterological	29.18	9.00
Behavioural	25.34	6.21
Bodily	11.50	3.64
Depression, Anxiety, and Stress Scale (Total)	44.38	26.57
Depression	14.43	11.11
Anxiety	12.44	9.68
Stress	17.51	9.50
Body Dissatisfaction Subscale of the Eating Disorder Inventory	17.50	9.74
Eating Disorder Examination Questionnaire (Global)	1.78	1.29

Scale	Mean	Standard Deviation
Eating Concern	1.31	1.45
Shape Concern	2.21	1.39
Weight Concern	1.86	1.28
Restraint	1.72	1.61
Forms of Bullying Scale	1.91	0.82
Verbal	2.29	1.17
Threatening	1.59	0.84
Physical	1.34	0.68
Social	2.12	1.12
Relational	2.21	1.05

Table 3

Difference in Average FBS-V Score Across Gender

Measure	Male	Female	*t*(351)	Cohen's *d*
	M (SD)	*M (SD)*		
Bullying – All Types	0.82 (0.91)	0.90 (0.78)	0.67	.11
Social/Relational Bullying	0.90 (1.13)	1.18 (1.00)	1.82	.29
Verbal Bullying	1.21 (1.17)	1.28 (1.15)	0.40	.06
Threatening	0.55 (0.88)	0.57 (0.81)	0.17	.02
Physical Bullying	0.53 (0.91)	0.30 (0.61)	2.18*	.34

*$p < .05$.

Table 4

Correlations Between All Forms of Bullying and Study Variables

Variable	1	2	3	4	5	6	7	8
1. Bullying – All types	—							
2. Bullying – Social/relational	0.93**	—						
3. Bullying - Verbal	0.88**	0.73**	—					
4. Bullying - Threatening	0.82**	0.65**	0.63**	—		.		
5. Bullying - Physical	0.74**	0.54**	0.61**	0.65**	—			
6. Experience of shame	0.35**	0.35**	0.29**	0.29**	0.19**	—		
7. Body dissatisfaction	0.24**	0.28**	0.17*	0.21**	0.07	0.56**	—	
8. Disordered Eating	0.37**	0.38**	0.27**	0.33**	0.20**	0.60**	0.74**	—
9. Self-Compassion	-0.28**	-0.29**	-0.20**	-0.26**	-0.16*	-0.66**	-0.54**	-0.52**

*$p < .01$, **$p < .001$.

Table 5

Model Coefficients of Conditional Process Model Tested in Hypothesis 3

		Consequent						
		ESS			EDEQ			
Antecedent	Label	Coefficient	*SE*	*p*	Label	Coefficient	*SE*	*p*
FBS	a_1	3.54	0.94	< .001	c_1'	0.29	0.06	< .001
ESS		—	—	—	b_1	0.03	0.00	< .001
SCS	a_2	-13.62	0.93	< .001	c_2'	-0.81	0.08	< .001
FBS*SCS	a_3	2.69	0.94	< .005	c_3'	-0.12	0.08	.090
SCS*ESS		—	—	—	b_2	-0.01	0.01	.118
constant	i_M	108.07	3.87	< .001	i_y	-1.308	0.22	.136
		$R^2 = 0.476$				$R^2 = 0.425$		
		$F(3,355) = 107.49$				$F(5,353) = 52.116$		

Note. FBS refers to social/relational bullying, measured by the Forms of Bullying Scale, ESS refers to shame, measured by the Experience of Shame Scale, SCS refers to self-compassion, measured by the Self-Compassion Scale, and EDEQ refers to disordered eating, measured by the Eating Disorder Examination Questionnaire 6.0.

Table 6

Indirect and Direct Relationships Between Social/Relational Bullying and Disordered Eating at Different Levels of the Moderator, Self-Compassion

	Indirect				Direct		
	FBS - > ESS		ESS -> EDEQ				
Self-Compassion	Estimate	95% Bootstrap CI	Estimate	95% Bootstrap CI	Estimate	*SE*	*p*
Mean - 1*SD*	1.61	0.08 – 3.14	0.04	0.03 – 0.05	0.29	0.07	< .001
Mean	3.54	2.18 – 4.91	0.03	0.02 – 0.04	0.19	0.06	< .005
Mean + 1*SD*	5.48	3.27 – 7.70	0.03	0.02 – 0.04	0.08	0.10	.40

Note. FBS refers to social/relational bullying, measured by the Forms of Bullying Scale, ESS refers to shame, measured by the Experience of Shame Scale, SCS refers to self-compassion, measured by the Self-Compassion Scale, and EDEQ refers to disordered eating, measured by the Eating Disorder Examination Questionnaire 6.0.

Figure 1

Conceptual Model Diagram of Conditional Process Analysis

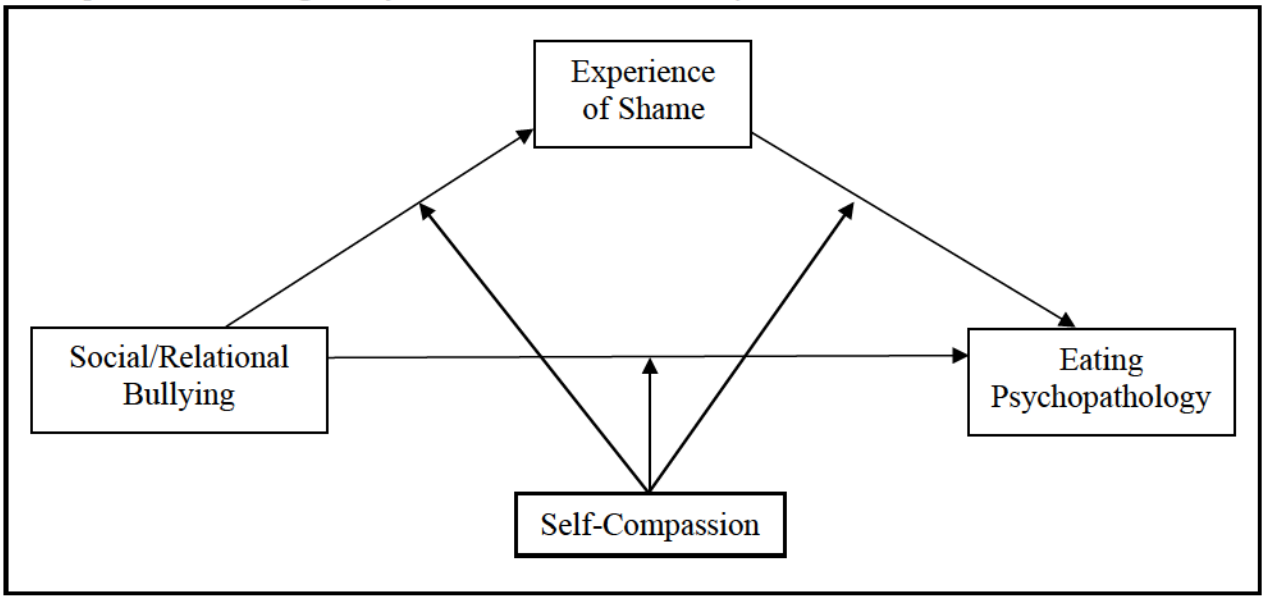
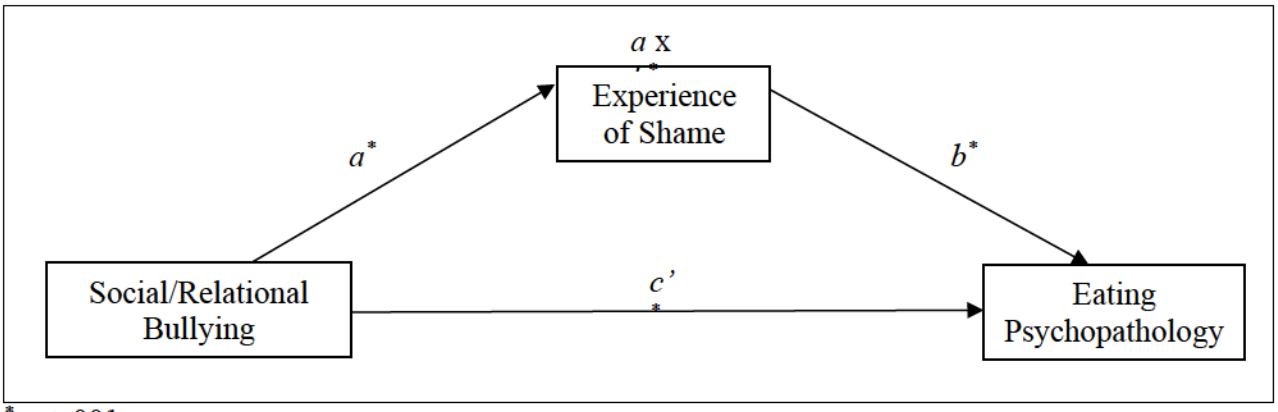


Figure 2

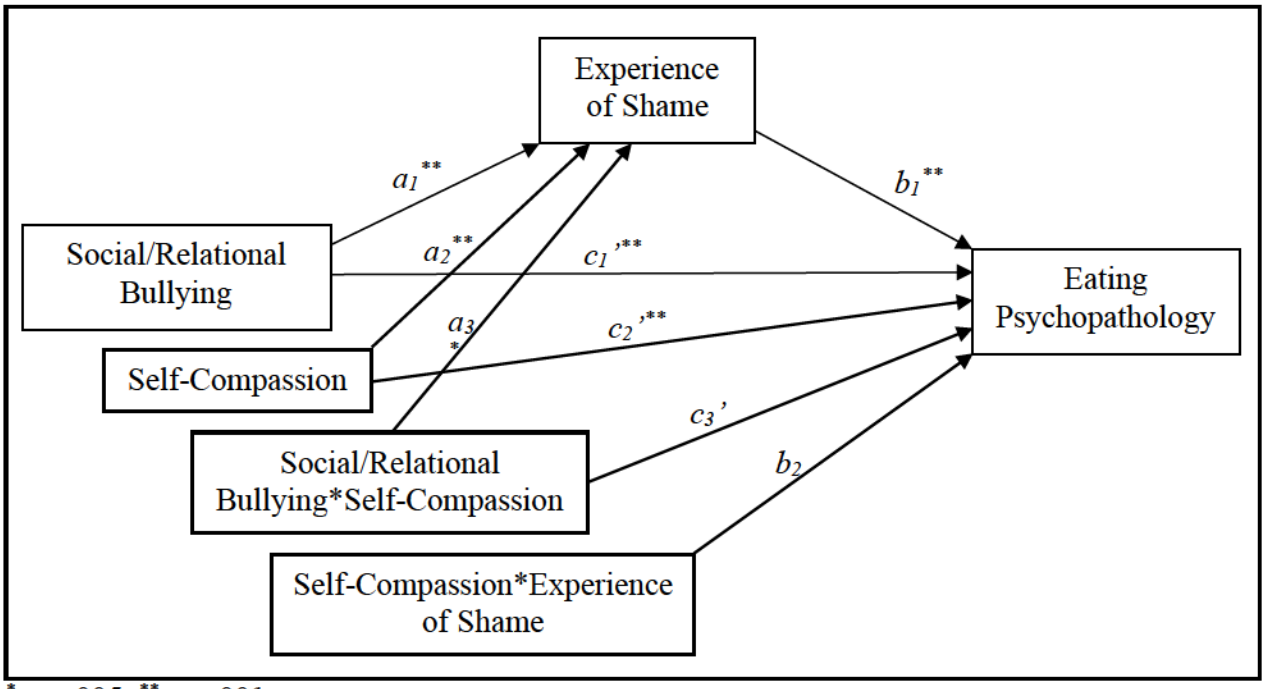
Model of the Mediation of the Relationship Between Bullying and Disordered Eating by Shame



*$p < .001$.

Figure 3

Statistical Model of Conditional Mediation



*p < .005, **p < .001

Appendix A: Online Informed Consent Form

You are invited to take part in a research project entitled "Childhood Peer Experiences and Current Eating Behaviour".

This form is part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. It also describes your right to withdraw from the study. In order to decide whether you wish to participate in this research study, you should understand enough about its risks and benefits to be able to make an informed decision. This is the informed consent process. Take time to read this carefully and to understand the information given to you. Please contact the researcher, Lindsay-Ann Bellows, if you have any questions about the study or for more information not included here before you consent.

It is entirely up to you to decide whether to take part in this research. If you choose not to take part in this research or if you decide to withdraw from the research once it has started, there will be no negative consequences for you, now or in the future.

Introduction
Our names are Lindsay-Ann Bellows and Julia Clarke and as part of our Masters/Honours theses we are conducting research under the supervision of Dr Jacqueline Carter-Major about childhood peer experiences and later eating behaviour. This study is available to students of Memorial University of Newfoundland through the Psychology Research Experience Pool (PREP).

Purpose of study:
The purpose of this study is to examine how relationships people have with their peers in childhood affects their later self-concept and eating behaviour.

What you will do in this study:
If you decide to complete this study, you will complete a series of short surveys. The surveys will include questions about your childhood peer experiences, how you view yourself in relation to others, your attitudes towards yourself and your life events, your current height and weight, and your current eating behaviour. At the end, you will be asked a few questions about yourself (e.g. your age and gender).

Length of time:
It should take approximately 35-50 minutes to complete this study.

Withdrawal from the study:
There are no consequences for withdrawing from the study. You may withdraw from the study at any time up, until you submit your final response, by clicking the EXIT button on the screen. If

you choose to withdraw from this study after beginning the survey, you will still receive a bonus point in your psychology course. If you choose to withdraw while completing the survey any information you have entered up until the point of withdrawal will be deleted from the online system. Please note that it will not be possible to withdraw your responses from the study after you submit the full-length survey because all data will be anonymized (i.e., there is no way to link your identity to your responses).

Possible benefits:
Participating in this research can be a learning opportunity. You may gain knowledge or insight about the research process. You will also be contributing valuable information to the scientific community. Your data may help researchers learn about healthy eating behaviour and be able distribute that knowledge, potentially helping the general population as well.

Possible risks:
Questions in this study may remind you of upsetting memories from your childhood. It is possible, depending on your experience, that these memories may cause you to experience distress. Other questions may make you worry about your own eating behaviour or your weight. It is important to remember that you may skip any questions that you do not wish to answer. If you would like to speak further about the information in this survey you may contact Dr. Jacqueline Carter-Major at jacqueline.carter@mun.ca. If you have concerns about your mental well-being you may also receive support by contacting the MUN Student Wellness and Counselling Center at 709-864-8500 or by calling the provincial Mental Health Helpline at 709-737-4668.

Confidentiality:
Confidentiality is ensuring that identities of participants are accessible only to those authorized to have access. All data that you provide will remain confidential. Only the researchers will have access to any and all data. No personally identifiable information will be associated with your data. Your SONA ID will be removed prior to data analyses.

Your course instructor will not have access to participation details. He or she will only be able to view the total number of credit points earned by students and will not know whether you have participated in this, or any other study, nor whether any credit points earned from participation in any study were earned from Research Participation, Research Observation, or completion of the alternative assignment.

Anonymity:
Anonymity refers to not disclosing participant's identifying characteristics, such as name or description of physical appearance.

Every reasonable effort will be made to ensure participant anonymity. In the current study, no identifying information will be included on the survey itself and results of this research will be presented or published in aggregate form only. Any information provided on the SONA system

will be kept separate from survey responses. No identifying information will be included in any publications of this research; data will be presented in aggregate form only.

Use, access, ownership, and storage of data:
All data will be stored on a password-protected computer in encrypted folders. The researchers Lindsay-Ann Bellows, Julia Clarke, and Dr. Jacqueline Carter-Major, will be the only individuals with access to the data. Anonymized data will be kept for a minimum of five years as required by Memorial University policy on Integrity of Scholarly Research. Following this five-year period all data will be completely destroyed.

Third-party data collection and/or storage:
Data collected from you as part of your participation in this project will be hosted by the online survey platform, Qualtrics. All data stored by Qualtrics is subject to their privacy policy and to any relevant laws of the country in which their servers are located. Therefore, anonymity and confidentiality of data may not be guaranteed in the rare instance, for example, that government agencies obtain a court order compelling the provider to grant access to specific data stored on their servers. If you have questions or concerns about how your data will be collected or stored, please contact the researcher and/or visit the provider's website for more information before participating.

The Qualtrics privacy statement can be found at: https://www.qualtrics.com/privacy-statement/
The Qualtrics security statement can be found at: https://www.qualtrics.com/security-statement/

Research Participation vs. Research Observation
Your participation in this study is intended to be an educational Research Experience. You therefore have the choice of whether or not to provide data to researchers for inclusion in their analysis. If you consent to provide your data for analysis, please check the box below labeled "Research Participation". However, if you wish to observe the process of research participation without providing data to researchers for inclusion in their analysis, then you may choose to do so, without any loss of experience or credit. If you consent to observe the research experience without providing any data, please check the box below labeled "Research Observation". Please note that you may choose to change your Research Experience from Participation to Observation at any time before submitting the final page of the online survey without loss of experience or credit.

Reporting of Results:
The data collected from this survey will be utilized for a master's thesis and an undergraduate honours thesis. These works will be available at Memorial University's Queen Elizabeth II Library and may be accessed online at http://collections.mun.ca/cdm/search/collection/theses. These works may also be presented and published in peer-reviewed forums. Any published information will include a summary of all information obtained from all participants and will not include any individual responses or identifying information.

Sharing of Results with Participants:
Participants may access the final thesis at Memorial University's Queen Elizabeth II Library using this link to search: http://collections.mun.ca/cdm/search/collection/theses

Questions:
You are welcome to ask questions at any time during your participation in this research. If you would like more information about this study, please contact Lindsay-Ann Bellows or Dr. Jacqueline Carter-Major using the contact information provided on this form.

The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research, such as the way you have been treated or your rights as a participant, you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-864-2861.

Consent:
By choosing to complete this study, you agree that:

- You have read the information about the research.
- You have been advised that you may ask questions about this study and receive answers prior to continuing.
- You are satisfied that any questions you had have been addressed.
- You understand what the study is about and what you will be doing.
- You understand that you are free to withdraw participation from the study by closing your browser window or navigating away from this page, without having to give a reason and that doing so will not affect you now or in the future.
- You understand the difference between Research Participation and Research Observation, and that you may freely choose which Research Experience option you prefer.
- You understand that you are free to change your Research Experience option from Participation to Observation at any time before submitting the final page of the survey, without having to give a reason, and that doing so will not affect you now or in the future. You will be asked below and again on the final page of the survey which research option you prefer.
- You understand that any data collected from you up to the point of your choice to participate as a Research Observer will be destroyed.
- You understand that this data is being collected anonymously and therefore your data **cannot** be removed once you submit this survey.

By consenting to this online survey, you do not give up your legal rights and do not release the researchers from their professional responsibilities.

Please retain a copy of this consent information for your records.

Research Participation vs. Research Observation

Your participation in this study was intended to be an educational Research Experience. You therefore have the choice of whether or not to provide data to researchers for inclusion in their analysis. If you consent to provide your data for analysis, please check the box below labeled "Research Participation". However, if you wish to observe the process of research participation without providing data to researchers for inclusion in their analysis, then you may choose to do so, without any loss of experience or credit. If you consent to observe the research experience without providing any data, please check the box below labeled "Research Observation".

- ☐ Research Participation: I consent to provide data from my research experience to researchers for analysis.

- ☐ Research Observation: I do not consent to provide data from my research experience to researchers for analysis.

Appendix B: Debriefing Form

Thank you for participating in the study! Your participation and the data that you contribute are valuable for our research. This feedback sheet is intended to explain to you the purpose and hypotheses of the study in which you have just participated.

The specific purpose of this study was not initially made available to you, as we aimed to avoid any prior ideas that you may have about bullying, body image, or disordered eating influencing your response. Therefore, we made reference only to general peer relationships and eating behaviours. The specific purpose of this study was to understand relationships between maladaptive eating behaviours and body image dissatisfaction, bullying experiences, shame, self-compassion, and social comparison. Though several of these factors had been previously analysed in conjunction with disordered eating behaviours and maladaptive thoughts, we aimed to look specifically at previous experiences of relational aggression. Relational aggression is a form of bullying where relationships or social status are harmed.

We hypothesize that level of self-compassion will moderate the relationship between bullying and shame – in other words, that higher self-compassion will alleviate some of the effects of bullying on feelings of shame. Furthermore, we anticipate that higher levels of self-compassion will be associated with lower disordered eating and negative body image scores, as well as less feelings of inferiority and negative social comparisons.

You completed measures designed to address this form of bullying, as well as measures addressing shame, self-compassion, body image, and disordered eating behaviour. The *Eating Disorder Examination Questionnaire (EDE-Q)* is a measure designed to assess disordered eating behaviour. The *Body Dissatisfaction* subscale of the *Eating Disorder Inventory (EDI)* is a measure designed to assess feelings you have towards your body. The *Forms of Bullying Scale* measured past bullying experiences. The *Depression, Anxiety, and Stress Scale* assessed mood and stress. The *Social Comparison and Social Comparison through Physical Appearance Scale* addressed your feelings about yourself in relation to others, on both general and appearance-focused dimensions. The *Self-Compassion Scale* measured your ability to engage in compassionate responses toward your own negative experiences or feelings. The *Social Safeness and Pleasure Scale* addressed positive feelings related to your social experiences. The *Experience of Shame Scale* measured feelings of shame you have experienced about your thoughts, behaviours, and physical appearance.

Some of the questions you answered may have reminded you of upsetting memories from your childhood or resulted in feelings of distress. If you would like to talk with anyone about this experience, you may contact Jacqueline Carter-Major, a registered clinical psychologist, at jacquelinec@mun.ca. You may also call or text the Warm Line to speak with a peer support worker, at 647-557-5882 (text) or 416-960-WARM (call). For in-person services, Memorial University's Counselling Centre can be reached 709-864-8500.

With this information in mind, please indicate whether you consent to have your responses included in the final dataset for this study:

- I would like my data included in the study.
- I do not want my data included in the study.

If you have any ethical concerns about your participation in this study (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-864-2861.

We appreciate your participation in this study and hope that this has been an interesting experience. If you have any additional questions about this research or other research conducted in this lab, please contact the Primary Investigator Lindsay-Ann Bellows at lab184@mun.ca.

If you would like to learn more about the role of bullying, self-compassion, shame, and body image dissatisfaction in disordered eating behaviour, please see the following articles:

Duarte, C. & Pinto-Gouveia, J. (2017). Can self-reassurance buffer against the impact of bullying? Effects on body shame and disordered eating in adolescence. *Journal of Child and Family Studies, 26*, 998-106.

Matos, M., Ferreira, C., Duarte, C., & Pinto-Gouveia, J. (2015). Eating disorders: When social rank perceptions are shaped by early shame experiences. *Psychology and Psychotherapy: Theory, Research and Practice, 88*, 38-55.

Appendix C: Demographic Questionnaire

Please answer the following questions as accurately as possible. **Your responses are completely anonymous and confidential.** No identifying information (e.g., your name, e-mail address, etc.) will be linked to any of information you provide. You may skip any questions you do not wish to answer.

1. What is your age? (years) _____

2. With which gender do you best identify?
    a) Male
    b) Female
    c) Transgender
    d) Prefer not to say
    e) Other

3. How would you describe your relationship status?
    a) Single
    b) In a relationship
    c) Married or common law
    d) Divorced
    e) Widowed
    f) Separated

4. What is your height? (feet, inches): _____

5. What is your weight in pounds? (lbs): _____

6. What is your ethnic background?
    a) Caucasian/White
    b) African-Canadian/Black
    c) Hispanic/Latino
    d) Asian
    e) Indigenous (First Nations, Inuit, or Metis)
    f) Middle Eastern
    g) East Indian
    h) Other, please specify: _____

7. What is the highest level of education you have completed to date?
    a) High school diploma or equivalent
    b) Some undergraduate training, no degree
    c) Bachelor's degree completed
    d) Some graduate training (master's or doctorate)
    e) Master's degree completed
    f) Doctorate degree completed
    g) Professional degree completed

8. If you are completing this survey as an undergraduate student, do you live in residence?
    a) Yes
    b) No, but I have in the past
    c) No, and I have never lived in residence
    d) Does not apply to me

9. What is the highest level of education completed by your parent(s)/primary caregiver? If you have two parents/caregivers who have completed different levels of education, refer to parent/caregiver with the highest level of education.
    a) No formal schooling completed
    b) Some primary/elementary schooling completed
    c) Some high school, no diploma
    d) High school diploma or equivalent
    e) Some undergraduate training, no degree
    f) Bachelor's degree completed
    g) Some graduate training (master's or doctorate)
    h) Master's degree completed
    i) Doctorate degree completed
    j) Professional degree completed
    k) Trade/technical/vocational training completed

10. Are you currently employed?
    a) Not employed
    b) Currently hold part-time employment
    c) Currently hold full-time employment

11. Have you ever been diagnosed with an eating disorder by a healthcare professional?
    a) Yes
    b) No
    c) I have never been formally diagnosed, but I believe I have an eating disorder

12. Are you aware of an immediate family member who has been diagnosed with an eating disorder by a healthcare professional?
    a) Yes
    b) No
    c) I am not aware of an immediate family member having been formally diagnosed, but I believe one of my immediate family members has an eating disorder

13. Have you ever been diagnosed with any other mental disorder by a healthcare professional?
    a) Yes
    b) No
    c) I have never been formally diagnosed, but I believe I have a mental disorder

14. Are you aware of an immediate family member who has been diagnosed with a mental disorder by a healthcare professional?
    a) Yes
    b) No
    c) I am not aware of any immediate family member having been formally diagnosed, but I believe one of my immediate family members has a mental disorder

Appendix D: Self-Compassion Scale

Instructions: Please indicate how often you act in the following ways.

	Almost never				Almost always
I try to be understanding and patient towards those aspects of my personality I don't like.	1	2	3	4	5
I'm kind to myself when I'm experiencing suffering.	1	2	3	4	5
When I'm going through a very hard time, I give myself the caring and tenderness I need.	1	2	3	4	5
I'm tolerant of my own flaws and inadequacies.	1	2	3	4	5
I try to be loving towards myself when I'm feeling emotional pain.	1	2	3	4	5
When I see aspects of myself that I don't like, I get down on myself.	1	2	3	4	5
When times are really difficult, I tend to be tough on myself.	1	2	3	4	5
I can be a bit cold-hearted towards myself when I'm experiencing suffering.	1	2	3	4	5
I'm disapproving and judgmental about my own flaws and inadequacies.	1	2	3	4	5
I'm intolerant and impatient towards those aspects of my personality I don't like.	1	2	3	4	5
When I feel inadequate in some way, I try to remind myself that feelings of inadequacy are shared by most people.	1	2	3	4	5
I try to see my failings as part of the human condition.	1	2	3	4	5
When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am.	1	2	3	4	5
When things are going badly for me, I see the difficulties as part of life that everyone goes through.	1	2	3	4	5
When I fail at something that's important to me I tend to feel alone in my failure.	1	2	3	4	5
When I think about my inadequacies it tends to make me feel more separate	1	2	3	4	5

and cut off from the rest of the world.					
When I'm feeling down I tend to feel like most other people are probably happier than I am.	1	2	3	4	5
When I'm really struggling I tend to feel like other people must be having an easier time of it.	1	2	3	4	5
When something upsets me I try to keep my emotions in balance.	1	2	3	4	5
When I'm feeling down I try to approach my feelings with curiosity and openness.	1	2	3	4	5
When something painful happens I try to take a balanced view of the situation.	1	2	3	4	5
When I fail at something important to me I try to keep things in perspective.	1	2	3	4	5
When something upsets me I get carried away with my feelings.	1	2	3	4	5
When I'm feeling down I tend to obsess and fixate on everything that's wrong.	1	2	3	4	5
When something painful happens I tend to blow the incident out of proportion.	1	2	3	4	5
When I fail at something important to me I become consumed by feelings of inadequacy.	1	2	3	4	5

Appendix E: Experience of Shame Scale

Instructions: Everybody at times can feel embarrassed, self-conscious or ashamed. These questions are about such feelings if they have occurred **at any time in the past year**. There are no 'right' or 'wrong' answers. Please indicate the response which applies to you.

	Not at all	A little	Moderately	Very much
Have you ever felt ashamed of any of your personal habits?	1	2	3	4
Have you worried about what other people think of any of your personal habits?	1	2	3	4
Have you tried to cover up or conceal any of your personal habits?	1	2	3	4
Have you felt ashamed of your manner with others?	1	2	3	4
Have you worried about what other people think of your manner with others?	1	2	3	4
Have you avoided people because of your manner?	1	2	3	4
Have you felt ashamed of the sort of person you are?	1	2	3	4
Have you worried about what other people think of the sort of person you are?	1	2	3	4
Have you tried to conceal from others the sort of person you are?	1	2	3	4
Have you felt ashamed of your ability to do things?	1	2	3	4
Have you worried about what other people think of your ability to do things?	1	2	3	4
Have you avoided people because of your inability to do things?	1	2	3	4
Do you feel ashamed when you do something wrong?	1	2	3	4
Have you worried about what other people think of you when you do something wrong?	1	2	3	4
Have you tried to cover up or conceal things you felt ashamed of having done?	1	2	3	4
Have you felt ashamed when you said something stupid?	1	2	3	4
Have you worried about what other people think of you when you said something stupid?	1	2	3	4
Have you avoided contact with anyone who knew you said something stupid?	1	2	3	4

Have you felt ashamed when you failed in a competitive situation?	1	2	3	4
Have you worried about what other people think of you when you failed in a competitive situation?	1	2	3	4
Have you avoided people who have seen you fail?	1	2	3	4
Have you felt ashamed of your body or any part of it?	1	2	3	4
Have you worried about what other people think of your appearance?	1	2	3	4
Have you avoided looking at yourself in the mirror?	1	2	3	4
Have you wanted to hide or conceal your body or any part of it?	1	2	3	4

Appendix F: Depression, Anxiety, and Stress Scale

Instructions: Please read each statement and select a number 0, 1, 2, or 3 which indicates how much the statement applied to you **over the past week.** There are no right or wrong answers. Do not spend too much time on any statement.

	Did not apply to me at all	Applied to me to some degree, or some of the time	Applied to me to a considerable degree or a good part of the time	Applied to me very much or most of the time
I found it hard to wind down.	0	1	2	3
I was aware of dryness in my mouth.	0	1	2	3
I couldn't seem to experience any positive feeling at all.	0	1	2	3
I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion).	0	1	2	3
I found it difficult to work up the initiative to do things.	0	1	2	3
I tended to over-react to situations.	0	1	2	3
I experienced trembling (e.g., in the hands).	0	1	2	3
I felt that I was using a lot of nervous energy.	0	1	2	3
I was worried about situations in which I might panic and make a fool of myself.	0	1	2	3
I felt that I had nothing to look forward to.	0	1	2	3
I found myself getting agitated.	0	1	2	3
I found it difficult to relax.	0	1	2	3
I felt down-hearted and blue.	0	1	2	3
I was intolerant of anything that kept me from getting on with what I was doing.	0	1	2	3
I felt I was close to panic.	0	1	2	3
I was unable to become enthusiastic about anything.	0	1	2	3
I felt I wasn't worth much as a person.	0	1	2	3
I felt that I was rather touchy.	0	1	2	3

I was aware of the action of my heart in the absence of physical exertion (e.g., sense of the heart rate increase, heart missing a beat).	0	1	2	3
I felt scared without any good reason.	0	1	2	3
I felt that life was meaningless.	0	1	2	3

Appendix G: Body Dissatisfaction Subscale of the Eating Disorder Inventory 3

Instructions: For each item, decide if the item is true about you ALWAYS, USUALLY, OFTEN, SOMETIMES, RARELY, OR NEVER. Click the letter that corresponds your rating. For example, if your rating for an item is OFTEN, you would click the "O" for that item.

	Always (A)	Usually (U)	Often (O)	Sometimes (S)	Rarely (R)	Never (N)
I think that my stomach is too big.	A	U	O	S	R	N
I think that my thighs are too large.	A	U	O	S	R	N
I think that my stomach is just the right size.	A	U	O	S	R	N
I feel satisfied with the shape of my body.	A	U	O	S	R	N
I like the shape of my buttocks.	A	U	O	S	R	N
I think my hips are too big.	A	U	O	S	R	N
I feel bloated after eating a normal meal.	A	U	O	S	R	N
I think that my thighs are just the right size.	A	U	O	S	R	N
I think my buttocks are too large.	A	U	O	S	R	N
I think that my hips are just the right size.	A	U	O	S	R	N

Appendix H: Eating Disorder Examination Questionnaire 6.0

Instructions: The following questions are concerned with the past four weeks (28 days) only. Please read each question carefully.
Questions 1 to 12: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days) only.

On how many of the past 28 days have…	No days	1-5 days	6-12 days	13-15 days	16-22 days	23-27 days	Every day
Have you been deliberately trying to limit the amount of food you eat to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
Have you gone for long periods of time (8 waking hours or more) without eating anything at all in order to influence your shape or weight?	0	1	2	3	4	5	6
Have you tried to exclude from your diet any foods that you like in order to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
Have you tried to follow definite rules regarding your eating (for example, a calorie limit) in order to influence your shape or weight (whether or not you have succeeded)?	0	1	2	3	4	5	6
Have you had a definite desire to have an empty stomach with the aim of influencing your shape or weight?	0	1	2	3	4	5	6
Have you had a definite desire to have a totally flat stomach?	0	1	2	3	4	5	6
Has thinking about food, eating or calories made it very difficult to concentrate on things you are interested in (for example, working, following a conversation, or reading)?	0	1	2	3	4	5	6
Has thinking about shape or weight made it very difficult to concentrate on things you are interested in (for example,	0	1	2	3	4	5	6

working, following a conversation, or reading)?							
Have you had a definite fear of losing control over eating?	0	1	2	3	4	5	6
Have you had a definite fear that you might gain weight?	0	1	2	3	4	5	6
Have you felt fat?	0	1	2	3	4	5	6
Have you had a strong desire to lose weight?	0	1	2	3	4	5	6

Questions 13-18: Please fill in the appropriate number in the boxes on the right. Remember that the questions only refer to the past four weeks (28 days).

Over the past 28 days, how many times have you eaten what other people would regards as an unusually large amount of food (given the circumstances)?	
... On how many of these times did you have a sense of having lost control over your eating (at the time you were eating)?	
Over the past 28 days, on how many DAYS have such episodes of overeating occurred (i.e. you have eaten an unusually large amount of food and have had a sense of loss of control at the time)?	
Over the past 28 days, how many times have you made yourself sick (vomit) as a means of controlling your shape or weight?	
Over the past 28 days, how many times have you taken laxatives as a means of controlling your shape or weight?	
Over the past 28 days, how many times have you exercised in a "driven" or "compulsive" way as a means of controlling your weight, shape or amount of fat, or to burn off calories?	

Questions 19 to 21: Please circle the appropriate number. Please note that for these questions the term "binge eating" means eating what others would regard as an unusually large amount of food for the circumstances, accompanied by a sense of having lost control over eating.

	No days	1-5 days	6-12 days	13-15 days	16-22 days	23-27 days	Every day
Over the past 28 days, on how many days have you eaten in secret (ie, furtively)? ... Do not count	0	1	2	3	4	5	6

episodes of binge eating.							
On what proportion of the times that you have eaten have you felt guilty (felt that you've done	0	1	2	3	4	5	6
wrong) because of its effect on your shape or weight? ... Do not count episodes of binge eating.	0	1	2	3	4	5	6
Over the past 28 days, how concerned have you been about other people seeing you eat? ... Do not count episodes of binge eating.	0	1	2	3	4	5	6

Questions 22 to 28: Please circle the appropriate number on the right. Remember that the questions only refer to the past four weeks (28 days).

Over the past 28 days…	Not at all	Slightly		Moderately		Markedly	
Has your weight influenced how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
Has your shape influenced how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
How much would it have upset you if you had been asked to weigh yourself once a week (no more, or less, often) for	0	1	2	3	4	5	6
the next four weeks?	0	1	2	3	4	5	6
How dissatisfied have you been with your weight?	0	1	2	3	4	5	6
How dissatisfied have you been with your shape?	0	1	2	3	4	5	6
How uncomfortable have you felt seeing your body (for example, seeing your shape in the mirror, in a shop window reflection, while undressing or taking a bath or shower)?	0	1	2	3	4	5	6

How uncomfortable have you felt about others seeing your shape or figure (for example, in communal changing rooms, when swimming, or wearing tight clothes)?	0	1	2	3	4	5	6

If female:

Over the past three to four months have you missed any menstrual periods?:

- ☐ YES
- ☐ NO

If so, how many? ____

Have you been taking the "pill"?

- ☐ YES
- ☐ NO

Appendix I: Forms of Bullying Scale

Instructions: Thinking back **as far as junior high,** how often have you been bullied (including cyberbullying) by one or more young people in the following ways, **then or now**?

	This did not happen to me	Once or twice	Every few weeks	About once a week	Several times a week or more
I was teased in nasty ways.	0	1	2	3	4
Secrets were told about me to others to hurt me.	0	1	2	3	4
I was hurt by someone trying to break up a friendship.	0	1	2	3	4
I was made to feel afraid by what someone said they would do to me.	0	1	2	3	4
I was deliberately hurt physically by someone and/or by a group ganging up on me.	0	1	2	3	4
I was called names in nasty ways.	0	1	2	3	4
Someone told me they wouldn't like me unless I did what they said.	0	1	2	3	4
My things were deliberately damaged, destroyed, or stolen.	0	1	2	3	4
Others tried to hurt me by leaving me out of a group or not talking to me.	0	1	2	3	4
Lies were told and/or false rumours spread about me by someone, to make my friends or others not like me.	0	1	2	3	4

Additional question:

If you indicated having any of the above experiences, when did you have these experiences?

- ☐ Junior high
- ☐ High School
- ☐ Undergraduate
- ☐ Does not apply to me